CBOD
GHANA CHAMBER OF BULK OIL DISTRIBUTORS

2019 GHANA PETROLEUM INDUSTRY REPORT

IN PARTNERSHIP WITH

MINISTRY OF ENERGY
Republic of Ghana

NATIONAL PETROLEUM AUTHORITY
NPA

AOMCs
ASSOCIATION OF OIL MARKETING COMPANIES

BENTSI-ENCHILL LETSA & ANKOMAH

ACEP
Africa Centre for Energy Policy

2019

GHANA PETROLEUM INDUSTRY REPORT

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Acknowledgement

The 2019 Ghana Petroleum Industry Report was prepared by a team of industry experts in the upstream and downstream petroleum sectors. The team is made up of the following:

Senyo Kwasi Hosi	CEO, Ghana Chamber of Bulk Oil Distributors
Benjamin Boakye	Executive Director, African Centre for Energy Policy
Dr. Steve Manteaw	Chairman, Ghana Extractive Industries Transparency Initiative
Sheila Addo	Director, Projects, Monitoring & Evaluation, National Petroleum Authority
Horace Hato	Head, Gas Commercialization Unit, Ministry of Energy
Abass Ibrahim Tasunti	Head, Pricing, National Petroleum Authority
Kodzo Yaotse	Senior Policy Analyst, African Centre for Energy Policy
Charles Gyamfi Ofori	Policy Analyst, African Centre for Energy Policy
Dr. Thomas Kojo Stephens	Senior Partner, Stobe Law
Dennis Newton Dei-Tutu	Policy & Research Manager, Chamber of Bulk Oil Distributors
Obed Kraine	Head, Petroleum Downstream Distribution & Marketing Unit, Ministry of Energy
Richard Kissi	Head of Finance & Industry Operations, Chamber of Bulk Oil Distributors
Wisdom Wissi	Research Analyst, Chamber of Bulk Oil Distributors
Gifty Duah-Boakye	Associate, Energy & Infrastructure Department of Bentsi-Enchill, Letsa & Ankomah
Maame Adjoa Ghunney	Associate, Energy & Infrastructure Department of Bentsi-Enchill, Letsa & Ankomah
Godwin Ofosuhene Nkrumah	Associate, Energy & Infrastructure Department of Bentsi-Enchill, Letsa & Ankomah
Amtul-Nasir Iddrisu	Associate, Energy & Infrastructure Department of Bentsi-Enchill, Letsa & Ankomah
Theodosia Tandoh	Associate, Energy & Infrastructure Department of Bentsi-Enchill, Letsa & Ankomah
Michelle Okyere	Associate, Energy & Infrastructure Department of Bentsi-Enchill, Letsa & Ankomah

Key contributions were made by other members of the editorial team comprising:

Ato-Kwamena Dadzie, MJ (Carlton University, Canada)
William Ntim-Boadu, MBA (Finance, University of Ghana), ACCA Affiliate
Rev. Mawuli Tsikata, BSc Agric (UG), BTh (Trinity Theological Seminary, Ghana)
Francisca Kakra Forson, LLB (University of London)
Divine Puplampu, BA Computer Science (UG)
Angela Osei-Badu, MA Management (UG)
Samuel Arnold-Armah, BSc Admin (UG), ACCA Affiliate
Safo Appiah-Oppong, BA Economics (Lafayette College, USA)
Dennis Nsafoah, PhD (C), (Economics, Calgary)
Emmanuel Obeng Boateng, BSc Admin (GIMPA)
Mrs. Paulina Kumah, Editor (Sonlife Press)

Excellent recommendations and extensive inputs were also received from, Board members, Government officials, Heads of Banks and other Petroleum Service Providers. Their diligence and assistance contributed immensely towards making this report possible.

List of **Abbreviations & Definitions**

AfCFTA
African Continental Free Trade Area

ABB
All Buoy Berth

ABFA
Annual Budget Funding Amount

AGPP
Atuabo Gas Processing Plant

AMV
Africa Mining Vision

APD
Accra Plains Depot

BDC
Bulk Distribution Company

BoG
Bank of Ghana

BOST
Bulk Oil Storage and Transportation

BRV
Bulk Road Vehicle

COMPANIES ACT
The Companies Act, 2019 (Act 992)

CBOD
Ghana Chamber of Bulk Oil Distributors

CWM
Cash Waterfall Mechanism

COT
Cirrus Oil Terminal

CREPT
Credit Rating in Practice

CSPOG
Civil Society Platform on Oil and Gas

DIDT
Discounted Industrial Development Tariff

DWCTP
Deepwater Cape Three Points

DWT
Deepwater Tano

EIA
Environmental Impact Assessment

EPA
Environmental Protection Agency

EPA Act
Environmental Protection Agency Act, 1994 (Act 490)

ESIA
Environmental and Social Impact Assessment

ESLA
Energy Sector Levies Act

ESRP
Energy Sector Recovery Programme

FC
Forestry Commission

FIA
Fisheries Impact Assessment

FPSO
Floating Production Storage and Offloading

FOB
Free on Board

FX
Foreign Exchange

List of **Abbreviations & Definitions**

FLUR
Forex Loss Under Recovery

GCC
Ghanaian Content Committee

GHS
Ghana Cedi

GHF
Ghana Heritage Fund

GIPC
Ghana Investment Promotion Centre

GIPC Act
Ghana Investment Promotion Centre Act, 2013 (Act 865)

Ghana Petroleum Funds
Collectively the Ghana Heritage Fund and the Ghana Stabilisation Fund

GNPC Act
Ghana National Petroleum Corporation Act, 1983 (PNDCL 64);

GNPC
Ghana National Petroleum Corporation

GPS
Global Position System

GPRS
General Packet Radio Services

GSA
Gas Sales Agreement

GSF
Ghana Stabilisation Fund

GOGIP
Ghana Oil and Gas Insurance Pool

GOVERNMENT
The Government of the Republic of Ghana

GoG
Government of Ghana

GRA
Ghana Revenue Authority

HSE
Health, Safety and Environment

IFC
International Finance Corporation

IGC
Indigenous Ghanaian company, being a company incorporated under the Companies Act that has at least 51% of its equity held by a citizen of Ghana; and at least 80% of its executive and senior management positions and 100% of non-managerial and other positions also held by citizens of Ghana.

IMP
International Market Price

INCOME TAX ACT
Income Tax Act, 2015 (Act 896)

INSURANCE ACT
Insurance Act, 2006 (Act 724)

INTERNAL REVENUE ACT
Internal Revenue Act, 2000 (Act 592) (as amended)

IOC
International Oil Company

IVM
In-Vehicle-Management

LBT
Land Boundary Terminus

List of **Abbreviations & Definitions**

LBL
Legacy Bonds Limited

LCO
Light Crude Oil

LPG
Liquified Petroleum Gas

Local Content Regulations
Petroleum (Local Content and Local Participation) Regulations, 2013 (LI 2204)

Measurement Regulations
The Petroleum (Exploration and Production) (Measurement Regulations), 2016 (LI 2246)

MGO
Marine Gasoil

Minister
Minister of Energy

NDPC
National Development Planning Commission

NIC
National Insurance Commission

NPA
National Petroleum Authority

NGTIN
Natural Gas Transmission Infrastructure Network

OCTP
Offshore Cape Three Points

OMC
Oil Marketing Company

OMA
Operation Management Agreement

OTC
Oil Trading Company

PA
Petroleum Agreement

PC
Petroleum Commission

Petroleum Commission Act
Petroleum Commission Act, 2011 (Act 821)

Petroleum Data Management Regulations
Petroleum (Exploration and Production) (Data Management) Regulations, 2017 (LI 2257)

Petroleum Fees and Charges Regulations
Petroleum Commission (Fees and Charges) Regulations, 2015 (LI 2221)

PEPA
The Petroleum (Exploration and Production) Act, 2016 (Act 919)

Petroleum General Regulations
Petroleum (Exploration and Production) (General) Regulations, 2018 (LI 2359)

Petroleum HSE Regulations
Petroleum (Exploration and Production) (Health, Safety and Environment) Regulations, 2017 (LI 2258)

PHF
Petroleum Holding Fund

PIAC
Public Interest and Accountability Committee

Petroleum Measurement Regulations
The Petroleum (Exploration and Production) (Measurement) Regulations, 2016 (LI 2246)

List of **Abbreviations & Definitions**

PITL
Petroleum Income Tax Law 1987 (PNDCL 188)

PNDCL 84
The Petroleum (Exploration and Production) Act, 1984 (PNDCL 84)

PPM
Price Parity Margin

PMS
Premium Motor Spirit

PRMA
Petroleum Revenue Management Act, 2011 (Act 815)

PSP
Petroleum Service Provider

RAA
Revenue Administration Act, 2016 (Act 919)

RFO
Residual Fuel Oil

RFID
Radio Frequency Identification Device

RSL
Road Safety Limited

RVF
Real Value Factor

SORF
Sanzule Onshore Receiving Facility

SEIA
Strategic Environmental Impact Assessment

SPT
Special Petroleum Tax

TDS
Takoradi Distribution Station

TFC
Tema Fuel Company

TOR
Tema Oil Refinery

TTF
Tema Tank Farm

TTIP
Takoradi-Tema Interconnection Project

UNFCCC
United Nations Framework Convention on Climate Change

UPPF
Unified Petroleum Price Fund

WAGP
West African Gas Pipeline

WCTP
West Cape Three Points

WTI
West Texas Intermediate

List of **Abbreviations & Definitions**

UNITS

BBLS
Barrels

BCF
Billion cubic feet

bn
Billion

GHS
Ghana Cedis

ltrs
Litres

mmscf
milliion standard cubic feet

mn
Million

mt
Metric tonnes

ppm
Parts per million

USD
US Dollar

$
US Dollar

Preface

The 2019 Ghana Petroleum Industry Report is an evolution from the CBOD Downstream Petroleum Reports published each year since 2016. This enhanced format of our annual report is designed to provide visibility and the insights relevant to decisions and considerations by policymakers, businesses, academics and industry watchers.

This report has been produced with editorial contributions from policy and market experts across industry as can be noted in the composition of the editorial team.

Unlike the previous editions, which focused mainly on the petroleum downstream sector, the 2019 edition covers segments of both the downstream and upstream sectors of the Ghanaian industry. Ghana holds a policy view that segments the petroleum sector as downstream and upstream with no mid-stream, as may be observed in other jurisdictions.

The midstream sector, which usually covers gas processing, crude storage, transporting and marketing of oil, natural gas and natural gas liquids, are considered a part of Ghana's downstream. However, as a result of the legacy relationships and regulations of the upstream sector in time past, some sections of the midstream (including the activities of the Ghana National Gas Company) are regulated or co-regulated by the upstream regulator, the Ghana Petroleum Commission.

This report is structured to reflect Ghana's two sectors – upstream (Chapter 1 to 4) and downstream (Chapter 5 to 8), with both sharing in the legal review (Chapter 4) and gas sections (Chapter 3).

The upstream sector provides a brief insight into Ghana's upstream petroleum history and reviews present and historical policy positions and happenings. It also reviews and reports on issues relating to finance, investments and fiscal policy in the sector.

The downstream section of this report maintains the structure of previous reports. It reviews policy, finance and fiscal policy, infrastructure and market happenings in the sector.

The gas section of the report provides a thorough review of the policy, finance and infrastructure situation of the sector.

The legal section provides insights into the legal regime regulating Ghana's petroleum sector and reviews key legal happenings and cases with major policy and investment implications. The section also presents a position paper on the Aker Energy, GNPC and Government of Ghana petroleum agreement.

The recommendation section, a regular feature in previous reports, has been excluded from this year's edition. This section often presents policy positions and recommendations for consideration by government and sector operatives on select issues. It will be restored in the 2020 edition which is expected to be published in 2021.

Editorial **Team**

Senyo K. Hosi
Editor-in-Chief
Chief Executive Officer
Chamber of Bulk Oil Distributors

Dennis Newton Dei-Tutu
Editor, Downstream
Policy & Research Manager
Chamber of Bulk Oil Distributors

Benjamin Boakye
Editor, Upstream
Executive Director
African Center for Energy Policy

Sheila Addo
Director, Projects Monitoring and Evaluation
National Petroleum Authority

Horace Hato
Head, Gas Commercilialization Unit
Ministry of Energy

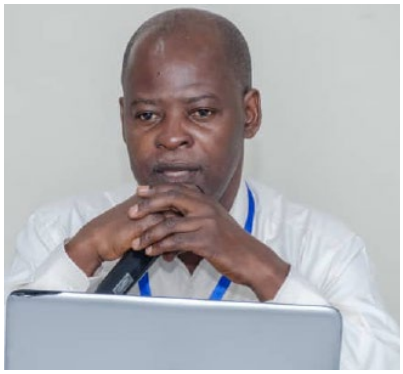
Abass Ibrahim Tasunti
Head, Pricing
National Petroleum Authority

Kodzo Yaotse
Senior Policy Analyst
African Center for Energy Policy

Charles Gyamfi Ofori
Policy Analyst
African Center for Energy Policy

Dr. Thomas Kojo Stephens
Senior Partner
Stobe Law

Editorial **Team**



Dr. Steve Manteaw
Chairman
Ghana Extractive Industries Transparency Initiative

Obed Kraine
Head, Pertoleum Downstream Distribution & Marketing Unit
Ministry of Energy

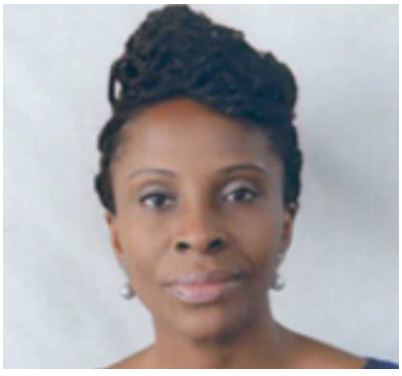
Mark Agyemang
Technical Manager
Public Interest Accountability Committee (PIAC)

Richard Kissi
Head, Finance & Industry Operations
Chamber of Bulk Oil Distributors

Wisdom Wissi
Research Analyst
Chamber of Bulk Oil Distributors

Seth Asante
Managing Partner and Head, Energy & Infrastructure Department
Bentsi-Enchill, Letsa & Ankomah

Seyram Dzikunu
Partner, Energy & Infrastructure Department
Bentsi-Enchill, Letsa & Ankomah



Elizabeth Ashun
Senior Associate, Energy & Infrastructure Department
Bentsi-Enchill, Letsa & Ankomah

Araba Attua-Afari
Senior Associate, Energy & Infrastructure Department
Bentsi-Enchill, Letsa & Ankomah

Key Industry **Personalities**

Hon. John Peter Amewu

John-Peter Amewu is the Minister of Energy in Ghana. He is the immediate-past Minister for Lands & Natural Resources and is credited with leading the fight against illegal small-scale mining (galamsey). Mr. Amewu is a cost engineer with broad knowledge in the energy and mining industries and an International Consultant in mining and petroleum. He is also a co-founder of the African Centre for Energy Policy (ACEP).

Mr. Amewu is a highly- trained mining professional, having attained various certificates from the Universities of Sydney and Western Australia. He has more than 15 years' experience in Government, Private Sector, Civil Society and International Development Organisations.
The Minister chairs the boards of some major private institutions in Ghana. Mr. Amewu is an astute politician and the immediate-past Regional Chairman of the New Patriotic Party (NPP) in the Volta Region.
He holds an MBA (Finance) from the University of Ghana, a Post-Graduate Degree (Executive MBA in International Energy Industry Management) and a Master's in Petroleum Law and Policy from the University of Dundee (UK).

Hon. Dr. Mohammed A. Adam

Dr. Mohammed Amin Adam is a Deputy Minister for Energy, responsible for the Petroleum sector. He founded the Africa Centre for Energy Policy (ACEP) and served as its Executive Director. He previously worked in other public and private organisations, such as the Ministry of Energy, as an Energy Policy Analyst; the Public Utilities Regulatory Commission (PURC) as a Commissioner, as a Deputy Minister of State for the Northern Region and Mayor of Tamale. Globally, he has worked extensively in the extractive industries and in resource management.

He, currently, serves on two international advisory boards – the Open Contracting Partnership and the Natural Resources and Community Review. He is a member of several global initiatives, including the Thematic Network on Good Governance of Extractive and Land Resources under the Sustainable Development Solutions Network, a global initiative of the United Nations.

In Ghana, he was a member of the Technical Committee, set up by the Government of Ghana to review the Ghana Petroleum Revenue Management Act. Dr. Adam holds a PhD in Petroleum Economics from the University of Dundee in the UK.

Key Industry **Personalities**

Alhassan Suleman Tampuli

Mr. Hassan Tampuli is the CEO of the National Petroleum Authority (NPA). He is a graduate of the School of Administration of the University of Ghana (now University of Ghana Business School) and Faculty of Law, UG. He was called to the Ghana Bar in 2011. He holds a Master of Laws degree (LL.M) in Energy and Environmental Law from Ohio State University Moritz College of Law. Mr. Tampuli previously worked with the National Service Scheme and rose to the rank of Deputy Head of HR and Acting Director of Postings.

In October 2011, he worked with the prestigious law firm, Bentsi-Enchill, Letsa & Ankomah's Energy and Natural Resource Practice Group as an Associate. He later set up and headed the Legal Department of the National Service Scheme between April 2014 and November 2015. Also, in 2015, he co-founded the law firm, Eastbridge Associates, which is a corporate law firm.

Mr. Tampuli also taught constitutional law at the Faculty of Law of the Wisconsin International University College for the 2014/15 academic year before resigning to concentrate on his private legal practice. He is a member of the Energy Sector Levy Act (ESLA) Bond Board of Directors, as well as a member of the Board of Directors at Tizaa Rural Bank in Gushegu in the Northern Region of Ghana.

Kwaku Agyeman-Duah

Kwaku Agyemang-Duah has been involved in the industry since 1987. He has worked in various senior management capacities in health and safety, production/operations, marketing, logistics and projects.

He is also an astute Quality Management systems expert and served on the Ghana Quality Standards Committee in the 1990's. Currently, he is the CEO/Industry Coordinator of the Oil Marketing Association of Ghana with more than one hundred Oil Marketing Companies and LPG Marketers. He is also the Chairman of the Governing Council of the Private Enterprises Federation, an organisation of fourteen major private associations in the country.

Kwaku holds a degree in Engineering and a Post-Graduate Diploma in Industrial Management as well as an MBA in Finance.

Key Industry **Personalities**

Egbert Faibille Jnr

EGBERT FAIBILLE JNR was appointed Chief Executive Officer of the Petroleum Commission in August 2017.

A lawyer by profession, Mr. Faibille Jnr. was prior to his appointment, the Managing Partner at Faibille & Faibille, a law firm in Accra.

Mr. Faibille Jnr. was also the Ghana Country Communications Representative of the West African Gas Pipeline Project (WAGP) when the Project was at its definitional phase. He was seconded to WAGP from his role as a Public Affairs Officer at the Ghana National Petroleum Corporation (GNPC). He was also at one time the Corporate & Regulatory Affairs Manager of British American Tobacco, Ghana.

As the CEO of the Petroleum Commission, he has a keen desire to promote local content and Ghanaian Participation in the oil and gas industry. These have been the underlining factors driving all projects that have been undertaken under his leadership.

Under Mr. Faibille's leadership, the Commission has as part of the Government's Accelerated Oil and Gas Capacity Programme (AOGC) incorporated the Ghana Institution of Welding (GIW). GIW aims to standardise welding training in Ghana under COTVET to international standards and thereby give Ghanaian welders a competitive edge in the upstream industry.

His tenure has also seen a steady increase in job role localisation for qualified Ghanaians in the upstream sector.

Mr. Faibille initiated a Local Content Procurement Conference, an annual conference that seeks to create a platform for local companies to understand the procurement needs of major International Oil Companies (IOCs). This ensures they are well equipped to bid for and win contracts in the upstream petroleum industry.

He has also successfully, led three Trade Missions to Aberdeen, Scotland; Stavanger, Norway and Calgary, Canada: three cities regarded as leading cities in upstream petroleum activities. These Trade Missions provide opportunities for Ghanaian oil and gas companies to network and interact with their international counterparts in a bid to build the necessary partnerships needed to build their capacities to play effective roles in the industry.

Mr. Egbert Faibille Jnr. chairs the Local Content Committee at the Petroleum Commission.

Key Industry **Personalities**

Ivy Apea Owusu

Ivy Apea Owusu is the Chief Executive Officer of Cirrus Oil Services Limited. In this role, she has been instrumental in the successful implementation of the downstream sector deregulation policies and has also spearheaded a wide range of health and education related community activities.

She has over 20 years' experience in the Energy Sector. An energy expert, Ivy previously worked with GE Capital in the US and UK in Energy Structured Finance specializing in both Debt and Equity financing in the Oil & Gas, Power Generation, Renewable and Ancillary Energy Services Sectors.

Ivy is the board chairman for the Chamber of Bulk Oil Distributors (CBOD) and also sits on the boards of Woodfields Energy Resources Ltd and Legacy Bonds Ltd. She is a member of the Executive Women's Network and a Corporate Executive in Residence for University of Ghana Business School (UGBS) Department of Accounting. Ivy has held numerous speaking engagements including at the 2020 ABSA Bank Ghana International Women's Day, African Refiners Association South Africa and CWC Energy Ghana.

Ivy holds leadership certificates from both Harvard and Stanford Business Schools in the USA, an MBA from Vanderbilt University in TN, USA and a BA Admin (Accounting) from the University of Ghana, Legon. Ivy has won numerous awards including 2018 Oil and Gas personality of the year 2018. She is married with two children.

Key Industry **Personalities**

Dr. Kofi Koduah Sarpong

Dr. Kofi Koduah Sarpong is a Ghanaian by birth born on 10th September, 1954 and hails from Beposo near Nsuta in the Ashanti Region of Ghana. Dr. Sarpong is married with adult children.

He began his primary education in his hometown. He then proceeded to the SDA Secondary School, Bekwai Ashanti from 1968 to 1973 and later to Sekondi College from 1973 to 1975 for his GCE 'O' Level and GCE 'A' Level certificates, respectively. Thereafter, Dr. Sarpong attended the University of Ghana where he obtained a Bachelor of Science (B.Sc.) degree in Business Administration and a Master of Business Administration (MBA).

He was also awarded a Master of Arts (MA) in Ministry from the Trinity Theological Seminary (Legon), a Master of Accountancy (M.Acc.) in International Accounting and Multinational Financial Management from the University of Glasgow (Scotland), and a Doctor of Philosophy (PhD) degree in Industrial & Business Studies from University of Warwick (England).

Dr. Sarpong qualified as a Chartered Accountant (CA Ghana) with the Institute of Chartered Accountants (Ghana) nearly four decades ago.

Dr. Sarpong has been in executive management for nearly thirty-five (35) years. Since January 2017, Dr. Sarpong has served as Chief Executive of Ghana National Petroleum Corporation (GNPC).

Dr. Sarpong has had an extensive Board exposure in twenty-six (26) organisations spanning financial services, transportation, manufacturing, commerce, mining, energy, education, NGOs and sports. Dr. Sarpong devotes his own resources to educate persons who show academic promise and assist persons with disabilities.

Key Industry **Personalities**

Edwin Alfred Provencal

Edwin is the current CEO of the Bulk Oil Distribution Company. Prior to his appointment at BOST, he served as the Technical Advisor to the Minister of Energy. He has over 15 years' experience in Executive Management roles in various organisations. He also served as the MD of Vodafone Wholesale/ National Communications Backbone Company and Director of Strategy at Vodafone Ghana where he led the Strategy Execution via Balanced Scorecard implementation organisation-wide.

He had previously worked at Ghana Telecoms and K-Net, a leading Internet Service Provider in Ghana. As a project manager and engineer in the telecom sector, he has managed over 15 projects, including Wide Area Networks for Ghana Commercial Bank, Standard Chartered Bank, VALCO and Ghana Bauxite, amongst others.

Edwin holds an MPhil in Economics, an MBA in Management Information Systems, a BSc in Electrical Engineering, a Post-Graduate Diploma in Financial Management from ACCA. He also holds a PMP from the Project Management Institute in the US. Edwin is also a graduate of the College of Executive Coaching, USA and is a Certified Balanced Scorecard Practitioner.

Benjamin Boakye

Benjamin Boakye is an energy governance professional with the Africa Centre for Energy Policy. He is currently the Executive Director at the Centre. Prior to this, he served as the Deputy Executive Director.
Benjamin has made contributions to the extractive sector governance in Ghana and Africa with a focus on corporate, institutional development, fiscal and contract governance and the evolution of legal frameworks for the effective management of extractive resources. He has also consulted for the World Bank, UNDP and other research institutions in the resource sector.

Benjamin also has extensive experience in power sector reforms. He currently chairs the stakeholder Committee of the Millennium Development Authority (MiDA), advising the MiDA Board on the implementation of the Power sector reforms.
Benjamin holds an MSc from the University of Dundee, UK, in Energy Studies and BA Hons. in Sociology and Information Studies from the University of Ghana.

CBOD **Board**

Ivy Apea Owusu
Chief Executive Offier,
Cirrus Oil Services Ltd
(Board Chair, CBOD)

Joyce Heman-Ackah
Chief Executive Offier,
Oil Channel Ltd
(Board Member, CBOD)

Kwame Bediako
Chief Operating Offier,
Chase Petroleum Ghana Ltd
(Board Member, CBOD)

Sebastian Asem
Chief Executive Offier,
Vihama Energy
(Board Member, CBOD)

Elton Dusi
Chief Executive Offier,
Maranatha Oil Services Limited (MOSL)
(Board Member, CBOD)

Yaw Koduah-Sarpong
Chief Executive Officer,
SA Energy Limited
(Board Member, CBOD)

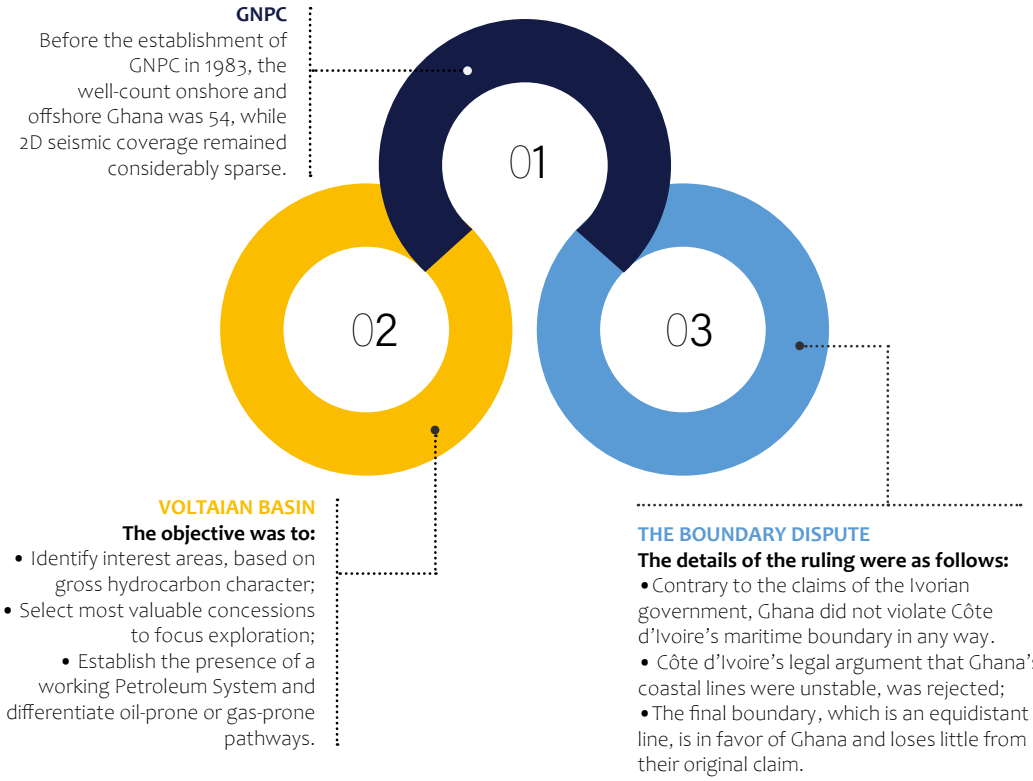
Emmanuel Egyei-Mensah
Chief Executive Offier,
Quantum Group and Sage Petroleum
(Board Member, CBOD)

Senyo Hosi
Chief Executive Offier,
Chamber for Bulk Oil Distributors
(Board Member, CBOD)


Upstream

1.0

Policy and Regulatory Review



1.0 Historical Overview & Evolution of Ghana's Upstream Petroleum Industry

Ghana has a history of oil and gas exploration that dates back to 1896; wells were drilled around Half Assini, following sightings of oil seeps onshore Tano Basin. Frantic efforts by Ghanaian governments to find oil in commercial quantities however, commenced in the 1970s, with the first deep water well, the South Dixcove 1X drilled in 900m of water depth in 1978 by Phillips Petroleum offshore Cape Three Points.

Exploratory activities were given further impetus in 1983 with the setting up of the Ghana National Petroleum Corporation (GNPC). Under GNPC, a number of oil and gas fields were found in the Tano basin. In all, 89 wells were drilled in the offshore zone, with six insignificant discoveries made. Ghana's first commercial oil and gas production began in the Saltpond Field in 1978, peaking at 4,500 bopd during its production stages until it was shut down in 1985. Before the establishment of GNPC in 1983, the well-count onshore and offshore Ghana was 54, while 2-D seismic coverage remained considerably sparse. GNPC funded the acquisition of several vintages of 2-D seismic data onshore and offshore Tano, offshore Saltpond basin, onshore and offshore Keta basin. These led to a densely gridded 2-D seismic coverage offshore and attracted more investor-interest in Ghana.

From the inception of GNPC in 1983 to 2007 (when Ghana made its first major discovery), over 30,000km of 2-D and over 5,000km of 3-D seismic data were acquired. In the early 1990s, GNPC reviewed all earlier oil and gas discoveries

to establish what further work was required on them, and to package same for the investment market. GNPC had, at the time, acquired its own rigs and was also seeking to sell its expertise abroad. It eventually won a contract in 1992 with Angola's state oil company, Sonangol, to drill and produce at two of Sonangol's offshore oilfields in return for a share of the oil.

The epic moment in Ghana's efforts at finding hydrocarbons within its territorial waters came in October 2007, when Tullow, operating the 1N-3X exploration well in the near shore Shallow Water Tano block, encountered hydrocarbons.

The Tullow Oil consortium then went further offshore and drilled the Mahogany-1 and Hyedua-1 wells which encountered substantial deposits. Hyedua-2 was subsequently drilled to appraise these discoveries. Tullow Oil also drilled the Ebony-1 exploration well in its shallow water license area, and again, made a discovery.

Most of 2008 was devoted to appraisal work and development planning activity for the Jubilee Field. The Mahogany-2 appraisal well was drilled and completed successfully in July 2008 by the Kosmos Energy consortium. In early 2008, Kosmos and its partners drilled another well, the Odum-1 exploration well, and also made a discovery. The Odum-1 well, which tested a different prospect from the Mahogany-1 discovery well, was suspended as a future development well.

It became apparent that the Tullow and Kosmos discoveries were straddled to a single reservoir and therefore, necessitated the negotiation of a unitisation agreement to facilitate joint operation of what has now come to be known as the Jubilee Field.

Tullow was, subsequently, named the operator among a consortium of five – Tullow, Kosmos, Anadarko, E.O Group and Sabre. In March 2008, the Jubilee Phase 1 development commenced. Between May and November 2008, appraisals of Mahogany-2 and Ebony-1 wells also encountered substantial reserves of hydrocarbons.

During the first quarter of 2009, the Mahogany-3 extension of the Jubilee field to the southeast was completed. The Hyedua-2 appraisal well was tested with a yield of 16,750 bopd. The Tweneboa-1 encountered new light hydrocarbons during the same period.

The Minister for Energy at the time, Dr. Oteng Adjei, formally approved the Jubilee field Phase 1 Development Plan and Unitisation Agreement on behalf of the Government of Ghana in July 2009 and in August, six development wells were drilled, successfully encountering anticipated reservoir thickness and quality.

GNPC, the custodian of the state's carried interest of 10 percent in Jubilee, is also assigned trusteeship (ownership) of the associated gas from Jubilee on behalf of the Government and people of Ghana. This may, however, change anytime soon as the government has taken a decision to make Ghana Gas Company the aggregator, processor and transporter of gas from Upstream to Downstream.

1.1 The Ghana - Ivorian Maritime Boundary Dispute

In 2010, having averted its attention to exploration successes of Ghana close to its maritime boundary, the Ivorian government began to protest against activities in what it considered part of its maritime jurisdiction.

This, subsequently, prompted the Government of Ghana to establish the Ghana Maritime Boundary Commission to begin negotiations with its western and eastern neighbours (Côte d'Ivoire and Togo, respectively) to properly and duly determine the country's land and maritime boundaries.

Following reports of incursions by Ivorian security personnel into the disputed maritime zone, and harassment of Ghanaian fishermen plying their trade there, Ghana, in 2014, took the matter to the International Tribunal for the Law of the Sea (ITLOS) for arbitration.

With the agreement of the parties, the Tribunal constituted a five-member Special Chamber including 2 adhoc judges to hear the case. As soon as hearing began, the Ivorian

government pleaded with the Special Chamber to institute interlocutory measures against Ghana's ongoing activities in the disputed area, in accordance with Article 290(1) of the United Nations Convention on the Law of the Sea (UNCLOS).

This was granted, and the following measures were instituted, requiring Ghana to:

- Ensure that no new drilling took place in the disputed maritime areas;
- Prevent undisclosed information on past, ongoing or future activities in the disputed area from being used to the detriment of La Côte d'Ivoire.

Having heard both parties in a proceeding that spanned three years, the Special Chamber of ITLOS on September 23, 2017, unanimously, ruled in favour of Ghana.

Details of the ruling of the Special Chamber were as follows:

- Contrary to the claims of the Ivorian government, Ghana did not violate Côte d'Ivoire's maritime boundary in anyway.
- Côte d'Ivoire's legal argument, that Ghana's coastal lines were unstable, was rejected;
- The final boundary, which is an equidistant line, is in favour of Ghana and loses little from their original claim.

The Chamber also found out that Ghana's oil and gas exploration activities in the disputed basin did not violate Côte d'Ivoire's sovereign rights.[1]

The resolution of the dispute paved way for the resumption of exploratory activities in the area, and for Hess Petroleum to proceed with its Plan of Development. Hess, however, took a decision to offload its interest in the Deepwater Tano block to Aker Energy, with Aker assuming operatorship.

The HESS field had seven (7) discoveries. Five (5) discoveries - Pecan, Almond, Pecan North, Cob and Beech - had been appraised by 2017. Three of the discoveries (Pecan, Pecan North and Almond) had been declared commercial, and the Cob discovery was determined to be non-commercial.

Aker, subsequently, succeeded in getting the Government of Ghana to effect some changes to its Petroleum Agreement inherited from Hess.

Another block that was affected by the injunction imposed by the Special Chamber was the South Deepwater Tano, operated by AGM Petroleum. The Government of Ghana has, following the final ITLOS ruling, proceeded to renegotiate the AGM contract, giving majority stake to Aker, and in the process, reducing Ghana's stake from 48 percent to 18 percent. Soon after the renegotiation of the AGM agreement in 2019, AGM announced a discovery in the Pecan area of its SDWT block estimated at 334 million barrels of oil.

1.2 Voltaian Basin Exploration

The first exploratory well in the Voltaian basin was drilled in 1974 by Shell, following the acquisition of a 206-line kilometre 2-D seismic data at the southern part of the Voltaian basin. Not much happened in the basin by way of exploration until Ghana's major offshore oil discovery.

Having fairly de-risked Ghana's offshore area, attention moved to onshore, with the approval of the Voltaian Basin Exploration Project by the GNPC board in 2011. The Project covers five (5) regions (Northern, Brong Ahafo, Ashanti, Eastern and Volta) and falls within the jurisdictions of about twenty-four (24) MMDAs in these regions.

GNPC has since continued with its exploratory activities aimed at confirming the hydrocarbon potential of the basin.

Specifically, the following activities have been undertaken:

- Acquisition of shallow gas samples, mainly Methane, Ethane, Butane and Propane, at selected locations within the Basin for geochemical analysis in Houston, Texas;
- Acquisition of 2-D Seismic Data under a contract signed between the Corporation and BGP-Bay Geophysical

1 Peiris, N. (2018). Ghana v. Ivory Coast. American Journal of International Law,

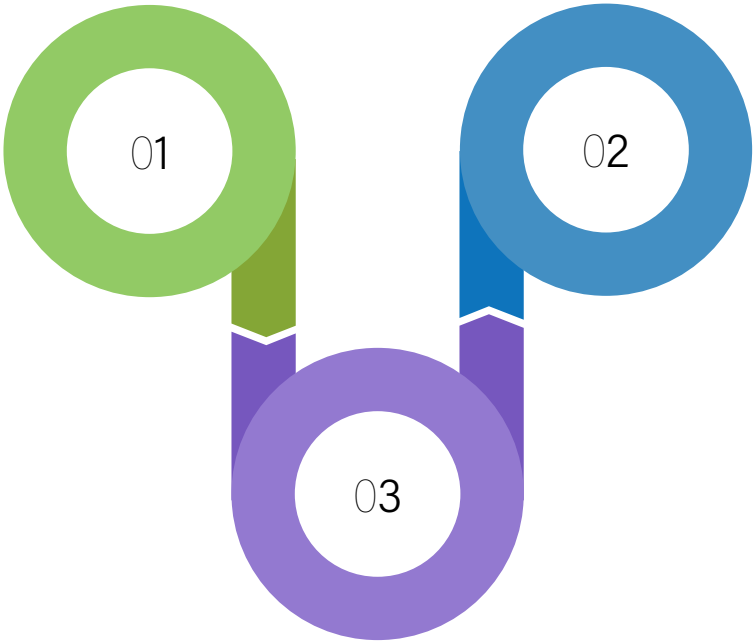
Services on 2nd October 2017. As of December 2018, approximately 1,552 km (88.2%) out of 1758 km of 2-D data had been acquired;
- Processing of 2-D Seismic data at BGP offices in China;
- Crop Compensation payments to farmers have almost been completed for all the lines in the Northern sector, except for Lines 105 and 107 which were acquired along roads.

A regional (Reconnaissance Scale) surface geochemical soil gas survey has also been conducted over the Volta Basin (November 2017 to June 2018).

GNPC's 2-D Seismic Data Acquisition Programme was completed on 13th February 2019, with a total of 1,871-line kilometres of data collected. In November 2019, GNPC commenced Phase 2 of its 2-D Seismic Data Acquisition Programme, and projected to collect about 649-line kilometres of 2-D seismic data in this phase.

The objective was to:

SELECT most valuable concessions to focus exploration;

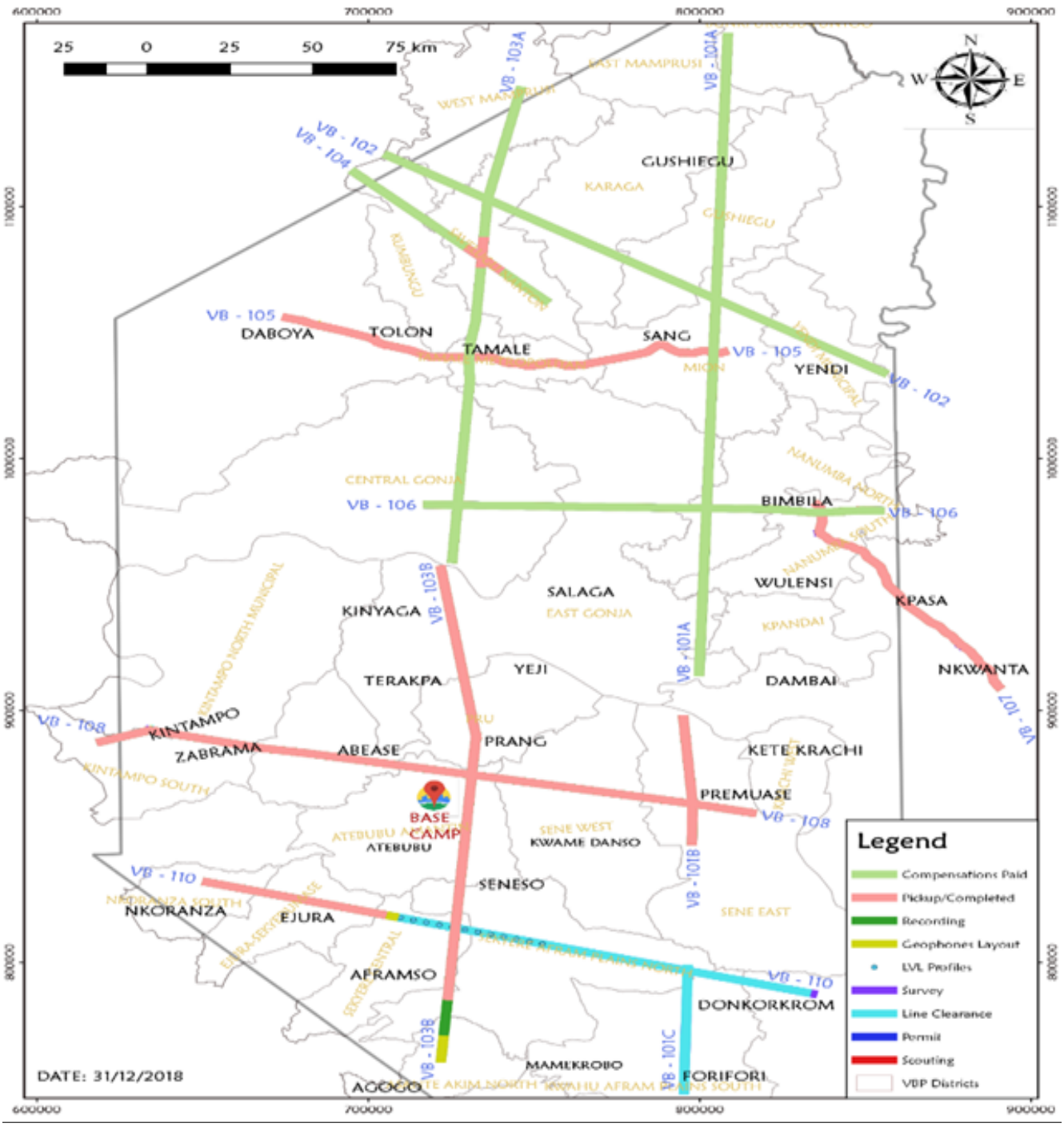


ESTABLISH the presence of a working Petroleum System and differentiate oil-prone or gas-prone pathways.

IDENTIFY interest areas, based on gross hydrocarbon character;

GNPC's 2-D Seismic Data Acquisition Programme was completed on 13th February 2019, with a total of 1,871-line kilometres of data collected. In November 2019, GNPC commenced Phase 2 of its 2-D Seismic Data Acquisition Programme, and projected to collect about 649-line kilometres of 2-D seismic data in this phase.

Figure 1: The Voltaian Basin Seismic Project Progress Map



1.3 Evolution of the Gas Sub-sector

The discovery of oil in commercial quantities created, as a natural consequence, a bright prospect for gas production and energy sustainability in Ghana. Prior to this, Ghana's energy mix had shifted substantially from hydro-power in the 1960s and 1970s, to thermal power, with a heavy reliance on Light Crude Oil (LCO). The reliance on LCO was necessitated by the transportation challenges associated with gas imports, and the unreliable supply of gas from the West Africa Gas Pipeline Project.

Ghana's Energy Policy of 2010 acknowledged that, "Ghana has a huge potential to grow and transform its economy through industrialisation with a view to creating jobs and ensuring equitable distribution of wealth." The role of energy and, for that matter, gas, in the transformation agenda of the country was not lost on the framers of the policy.

1.3.1 The Western Corridor Gas Infrastructure Project

The national energy policy intent has been to secure future fuel supplies, increase and diversify the fuel mix in power generation, through "support for strategic exploitation of domestic natural gas discoveries" and "encouragement of public-private partnership financing of natural gas infrastructure".

Crucial to the development of the infrastructure to harness the country's gas resources was financing. The Ghana National Petroleum Corporation was, therefore, tasked by the government in 2010 to find partners and the most efficient financing arrangement to develop the country's gas transportation and processing infrastructure. After what appeared to have been a long fruitless search, the then President of the Republic, the late Prof. John Evans Atta Mills, in the second quarter of 2011, set up a National Gas Development Task Force, chaired by Dr Kwesi Botchway, to work-out a road map to the development and utilisation of associated gas from Ghana's Jubilee oil field, as well as other gas reserves in Ghana's offshore zone. The taskforce in their final report recommended an early phase of gas harvesting and processing, which if implemented expeditiously, would enable the evacuation and treatment of associated gas from the Jubilee Field production.

Based on the committee's advice, the government established a wholly state-owned limited liability company to execute the project, with financing arrangement tied to a US$3 billion Chinese Development Bank facility meant largely for infrastructure projects and for developing the country's agro-export capabilities.

The Ghana National Gas Company was incorporated on July 27, 2011 under the Companies Code, 1963 (Act 179) as a limited liability company, wholly-owned and solely-financed by the Government of Ghana.

The Western Corridor Gas Infrastructure Project implementation agreement was signed on November 17, 2011 and on December 16, 2011, Ghana's Parliament approved a $3 billion Master Facility Agreement part of which was to finance the project. The subsidiary loan agreement of $850 million to finance the project was approved by Ghana's Parliament on June 13, 2012.

Under the terms of the project financing facility, the China Development Bank provided 85% of the funds for the project, while the Government of Ghana provided 15 percent. The Government of Ghana decided to on-lend the total funding amount to the Ghana Gas Company, with a view to getting the project to pay for itself when it was completed.

Ghana Gas' responsibility was to oversee the construction of the Western Corridor Gas Infrastructure Project – WCGIP, and a Gas Processing Plant. The project involved the construction of a 12-inch x 45km shallow water gas export pipeline coupled at 80 metre water depth to the existing 12-inch x 14km deep water pipeline (constructed by GNPC); a

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Project **Summary - WGCIP**

$3 billion
Master Facility Agreement

85%
Provided by China Development Bank

12 in x 45 km
shallow water gas export pipeline

12 in x 14 km
deep water pipeline (constructed by GNPC)

20 in x 75 km
onshore lean gas lateral pipeline

$850 million
Approved subsidiary loan

15%
Provided by the Ghana Government

80 m
water depth

20 in x 111 km
onshore lean gas trunk pipeline

natural gas processing plant in Atuabo, designed to process 150 million standard cubic feet of raw natural gas a day; 20-inch x 111 km onshore lean gas trunk pipeline from the processing plant at Atuabo to the Aboadze Thermal Plant; a 20-inch x 75 km onshore lean gas lateral pipeline from Esiama to Prestea; truck loading gantry; an offshore loading facility; an operations and controls office complex at or near the project site for use by staff during the commercial operations phase of the facilities (Source: Ghana Gas).

The Gas Processing Plant (GPP) comprises reception facilities, including inlet separation, gas chilling and de-ethanization, NGL fractionation, ethylene glycol injection & regeneration, methanol injection, LPG & condensate storage tanks and export unit. The rest are instrument air and nitrogen system, a heat medium system, flare & closed drain system, waste water treatment system, fire-fighting & closed drain system, power generation and cooling system for LPG.

The project was scheduled to be completed at the end of 2013. However, due to a 9-month delay in the disbursement of funds to the project contractors, and what Ghana Gas describes as unforeseen developments, including the loss of fabricated plates and equipment parts in a maritime accident, the project was completed at the end of 2014.

1.4 Governance of Ghana's Upstream Petroleum Industry

Governance of Ghana's hydrocarbon sector has evolved with the increasing desire of the government and the people to unleash the developmental potential of the resource in the country's quest for sustainable development. Policies, laws, regulations, and institutions in the sector are mostly nascent and still evolving.

1.4.1 Policy, Legal and Regulatory Regime

Ghana's upstream oil and gas industry is in its embryonic stages, even though exploratory activities had been ongoing for about a century, prior to the Jubilee discovery. In the early 1980s, the government established a new statutory and legal framework for petroleum exploration, as well as the institutional capacity to accelerate the country's exploration and production efforts. The Ghana National Petroleum Corporation Law, 1983 (P.N.D.C. Law 64) and the Petroleum (Exploration and Production) Law, 1984,

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(PNDC Law 84) were enacted. PNDC Law 64 established the Ghana National Petroleum Corporation (GNPC) as a statutory corporation with commercial functions to handle the country's Exploration and Production (E & P) activities. Though these initiatives were welcome, they were not guided by a clearly-articulated policy, or a broad-base national consensus on the anticipated role of hydrocarbons in the Ghanaian economy.

The country's first ever elaborate policy, espousing a clear vision for hydrocarbons within the Ghanaian economy was adopted in February 2010, as part of a broader energy sector policy. The goals of the petroleum sub-sector, as espoused in the policy document, are to ensure the sustainable exploration, development and production of the country's oil and gas endowment; the judicious management of the oil and gas revenue for the overall benefit and welfare of all Ghanaians and the indigenisation of related knowledge, expertise and technology.

Flowing from the 2010 petroleum sector policy, a new Petroleum (Exploration and Production) Law (Act 919) was enacted in 2016, to replace PNDCL 84, which was regarded as out of date with current trends in the industry. Ghana's oil and gas sector governance has received international recognition.

It scored a satisfactory 67 of 100 points, ranking the country as the 13th best governed among 89 countries in the 2017 Resource Governance Index (RGI), and making it the best performer in sub-Saharan Africa. In spite of this feat, the sector continues to grapple with some challenges in areas like regulatory overlaps, regulatory inefficiencies, weak oversight arrangements, licensing and contracting, local content and participation.

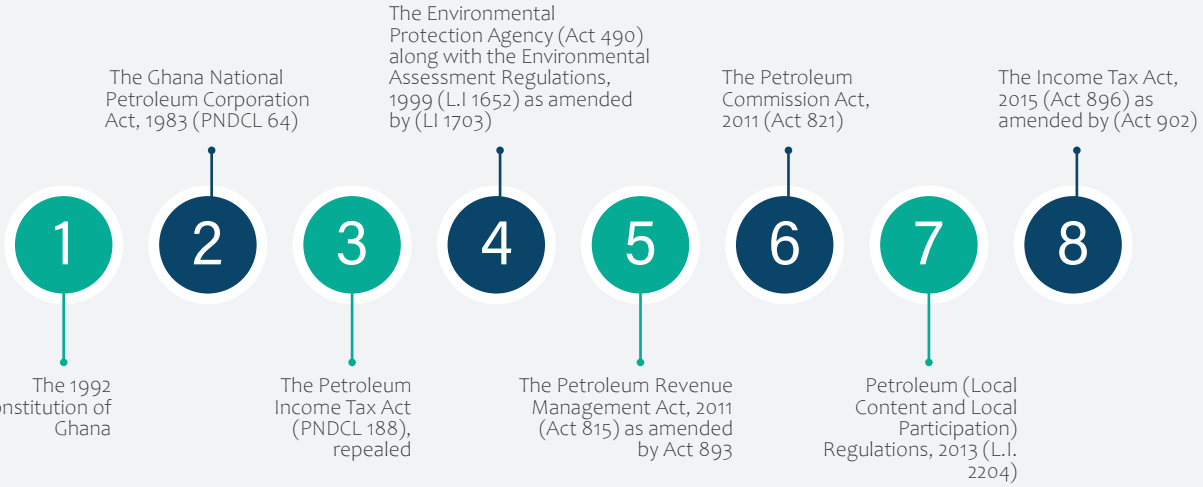
1.4.2 Institutional Gaps, Weaknesses, and Misalignment in Ghana's Petroleum Sector

Ghana, in 2008, opted for the 'separation of functions' model of industry regulation, and in 2011, established the Petroleum Commission.

However, the country's institutional arrangements bear a lot of the hallmarks of Argentina's, in terms of how the nature of the country's political settlement tends to undermine state institutions, including those in the energy sector.

It is recalled that, when in 2007, Ghana made its landmark Jubilee discovery, a petroleum desk was set up at the presidency, to lead the process of developing the governance framework for the sector, with the sector ministry playing a subservient role. The result was that, as at the time the country went into the 2009 political transition,

Other laws and regulations that govern the upstream petroleum industry are:



not much memory and capacity had been built or retained in the sector Ministry. Similarly, over-concentration of executive power in the President has led to a situation where heads of many state institutions, including those in the energy sector, such as GNPC, VRA, ECG, etc., are treated as part of the political establishment, and dispatched with the out-going government, sometimes without enough time to handover properly. The situation, no doubt, comes with the risk of losing institutional memory, and compromising the efficiency and effectiveness of such state institutions.

An analysis of the alignment between the Africa Mining Vision (AMV) and the status of Ghana's governance framework for its natural resources, undertaken by UNDP (2015), revealed that, so far as the building of human and institutional capacity is concerned, Ghana is not doing badly. The UNDP Report provides evidence of a deliberate policy and strategy to develop and promote a knowledge-driven competitive petroleum economy, borne out of the broad array of institutions established to pursue the country's petroleum sector policies. They list institutions, such as the Ministry for Energy, Petroleum Commission, the Ghana Geological Survey Authority, National Development Planning Commission (NDPC), The Environmental Protection Agency (EPA), Forestry Commission (FC), Ghana Revenue Authority (GRA), and CSOs, as strategic institutions mandated or positioned to work to ensure that Ghana remains a knowledge bastion in the petroleum economy. The Report, however, points out that, institutional weaknesses, overlaps and misalignment are rife in Ghana's petroleum sector, and these require urgent attention to keep the country on track to achieving its policy goals for the sector.

1.4.3 Summary of Regulatory and Institutional Weaknesses in the Sector

The key issues related to regulatory and institutional gaps - weaknesses are presented around the relevant link in the industry value chain, mainly around contracting, industry regulation, revenue collection, etc.

1.4.3.1 Contracting

Prior to the decision to open an area for petroleum activities, the Environmental Protection Agency (EPA) is required, under Sect. 7(4) of Act 919, to undertake a Strategic Environmental Impact Assessment (SEIA) to inform the decision.

While this is an improvement on the previous practice, where Environmental Impact Assessments (EIAs) preceded the SEIAs, concerns still remain about the role of the Geological Survey Department in arriving at the decision. UNDP (2015) raised concerns about the management of geological information, which forms the basis of attracting investment into the mining, oil and gas sectors, and on the basis of which mining contracts are negotiated. The analysis of the status of the country's management of geological and mineral information systems reveals a certain lack of coordination between the Geological Survey Authority, which is legally mandated to be the repository of geological data, and the various natural resource regulatory commissions (such as, the Petroleum Commission) which also collect geological data in the course of their regulatory functions.

The natural resource commissions and the Geological Survey Authority appear to work in silos (UNDP 2015). The country would be better served if the two collaborate and generate potential prospectivity maps, as well as collect and maintain data on rate of depletion of the country's mineral resources. Again, the lack of inter-agency collaboration is blamed for poor spatial planning, identified as a major factor accounting for inefficient allocation of mineral rights. For example, the Atuabo Gas Processing Plant is said to be sitting on one of Ghana's prime silica reserves, and on a gold bearing belt.

A successful best practice from Australia, which is recommended for Ghana is for the Geological Survey Authority to merge with the natural resource commissions or for the three institutions to be made to work in an integrated manner, in order to develop a common geological information system or portal for the country.

1.4.3.2 Industry Regulation

Regulation in natural resource extraction is important in ensuring responsible actions by operators, which in turn ensures that such actions exact a very minimum toll on the environment. Regulation also ensures the maintenance of an acceptable balance between the risks and rewards associated with resource extraction at all times[2].

Thurber et al. (2011),[3] commenting on models of institutional arrangements for the management and regulation of the petroleum industry, suggest that the Norwegian petroleum industry, often touted as a great success, has worked well because it is driven by a management model that is characterised by a separation of functions: a national oil company engaged in commercial hydrocarbon operations, a government ministry to help set policy and a regulatory body to provide oversight and technical expertise.

2 Oil and Gas in the U.K. - an independent review of the regulatory regime 2011
3 Exporting the "Norwegian Model": The effect of administrative design on oil sector performance

Thurber et al. (2011), however, do not think this model is applicable to all socio-political contexts.In a survey of petroleum management models in eight different countries, it was observed that the Norwegian model works better where there is political competition, coupled with developed human capacity and institutions.

Thurber et al., therefore, proceed to conclude that the 'separation of functions' model regarded as best practice, may, after all, not be the best solution for every oil-producing country's governance challenges. In their view, where there is low institutional capacity and low political competition, it is better to consolidate the functions; where there are low capacity institutions, but high political competition, the best approach is to develop technical and institutional capacity; and where there is high institutional capacity, but low political competition, the best approach would be to consolidate functions, and then separate functions when politics become more pluralistic.

Argentina, however, presents an interesting case which does not appear to be a perfect fit for the 'separation of functions' model, as recommended by Hults and Heller.
Though Argentina's political system is highly competitive, its institutions are undermined by a high level of political capture. Policy-making in the country's oil and gas sectors has, consequently, suffered a great deal of inconsistency, as the country passes through political transitions.

Patricia I. Vásquez (2016) argues that, in a highly politicised context, ***"where a powerful executive calls the shots, the role of the judiciary is typically perceived as marginal and rather ineffective".***

A rampant spate of socio-economic turbulence over the last two or three decades has led to the delegation of extraordinary powers to the executive in Argentina, giving rise to the incidence of unilateral policy decisions in the country's hydrocarbons sector. Such tendencies have ended up subverting the institutional and legal structures normally designed to establish checks and balances among branches of government. While globally-regulatory frameworks are heading towards a convergence of environment, health and safety, regulation of offshore activities in Ghana is dispersed, with industry standards, health and safety issues regulated by the Petroleum Commission, environmental regulation by the Environmental Protection Agency, and fisheries by the Fisheries Commission.

It is important to point out though, that the Petroleum Commission Act makes some commendable attempts to move towards a convergence with the EPA in the performance of their separate regulatory mandates by providing for the representation of the EPA on the Commission's board. However, the Fisheries Commission, whose statute of establishment also requires that a Fisheries Impact Assessment (FIA), is carried out before the commencement of offshore petroleum exploratory and production activities, is not represented on the Petroleum Commission's board. The result is that, most of the International Oil Companies (IOCs), undertaking exploratory and production activities in Ghana's waters, have not complied with the obligation to conduct a separate Fisheries Impact Assessment (FIA) prior to the commencement of their operations. The exception, perhaps, is Italian oil giant ENI, which is on record to have complied with the Fisheries Act of 2002, Act 625 by undertaking an FIA for its project area.

Section 93 (1) of the Fisheries Act stipulates that:
"A person or government department or other agency planning to conduct any activity, other than fishing, which is likely to have a substantial impact on the fishery resources or other aquatic resources of Ghana, shall inform the Fisheries Commission of the plans prior to the commencement of the planned activity, with a view to the conservation and protection of the resources."

Sub-section (2) further states that:
"The Commission may make or require reports and recommendation by those conducting the planned activity

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regarding the likely impact of the activity on the fishery resources or other aquatic resources of Ghana, and possible means of preventing or minimising adverse impacts, which shall be taken into account by the person, government department or other agency in the planning of the activity and in the development of means of preventing or minimising any adverse impacts".

Sub-section (3) of the Act further provides that, *"The requirement under this section shall be in addition to any other requirement of the Environmental Protection Agency."*

Though, the requirement is without prejudice to the Environmental and Social Impact Assessment (ESIA) the Jubilee Partners excused themselves from complying with the provision on the grounds that their ESIA took account of the requirement of the Fisheries Act and, for that matter, they integrated an assessment of fisheries impact into their study. But the Civil Society Platform on Oil and Gas (CSPOG) said in a protest letter it filed with the Board of Directors of the International Finance Corporation (IFC) in 2009, that, *"The EIA which was undertaken by Jubilee Partners was flawed in many respects and would not have passed in any country which is serious about protecting its environment".*

The group added: *"If a proper Fisheries Impact Assessment had been undertaken, it would have been possible to explain the unusual high incidence of recorded whale deaths along the coast of Ghana"* (CSPOG, 2009).

What is even more disturbing about this situation is the poor state of institutional preparedness to enforce the FIA requirement. The Fisheries Commission itself has not established the framework for the conduct of the exercise. It has no guidelines, and it is not clear what format the report must assume, and whether or not a permit would have to be issued. The poor state of Ghana's institutional preparedness to enforce the law, it appears, accounts for the non-compliance by companies.

Another major concern has to do with a seeming lack of regulatory clarity between the Petroleum Commission and the Energy Commission with respect to the gas sub-sector. This came to the fore when the Petroleum Commission ordered the Ghana Gas Company not to bury pipes it had laid until the Commission had investigated allegations that they were sub-standard. Ghana Gas ignored the order and proceeded to bury the pipes. Some contention, subsequently, emerged between the Petroleum Commission and the Energy Commission, as to where in the industry value-chain to situate the gas project – upstream or downstream. Upstream would have given the Petroleum Commission exclusive regulatory oversight; whereas, Downstream would have assigned such oversight to the Energy Commission. Somehow, the two institutions reached an agreement to treat the evacuation of gas from the Floating, Production, Storage, and Offloading (FPSO) vessel to the onshore facility as upstream, and the processing and transportation activities as mid-downstream. With this understanding, regulation of the gas infrastructure project is shared between the two entities.

1.5 GNPC's Changing Role

Among the list of responsibilities imposed by PNDC Law 64 on GNPC is one that requires the national oil company to ensure that petroleum operations are conducted in such a manner as to prevent adverse effects on the environment, resources and people of Ghana. However, this mandate has now shifted to the Petroleum Commission, following the decision to separate regulation from the GNPC's commercial operations. Unfortunately, the necessary amendments to GNPC's statute to give proper legal effect to this and other changes in the mandate of the Corporation have not been made.

1.5.1 Revenue Collection

The main reason for amalgamating the various revenue collection agencies into GRA was to make for better coordination and greater efficiency in domestic revenue mobilisation. It does not, however, appear that the various units of the GRA coordinate their activities or share information on a routine basis. For instance, the Petroleum Desk has always conducted separate field audits from the Transfer Pricing (TP) Unit and the Customs Division does not also routinely share information with the Transfer

Among the list of responsibilities imposed by PNDC Law 64 on GNPC is one that requires the national oil company to ensure that petroleum operations are conducted in such a manner as to prevent adverse effects on the environment, resources and people of Ghana.

Pricing Unit and the Petroleum Desk.

In the particular case of the Transfer Pricing Unit, it adopts a post-facto investigation/audit rather than real-time transaction monitoring to flag and detect potential cases of Transfer Pricing manipulation. This, perhaps, explains why the Unit was completely oblivious of the Ghana Gas-Sinopec deal and the incidence of Transfer Pricing that arose through project procurements. The Petroleum Unit of GRA has, however, indicated that a decision has been reached with the TP Unit to include staff of the TP Unit on the Petroleum Unit's field visits, and to better coordinate their activities.

1.6 The National Development Planning Commission (NDPC)

The NDPC's role in the discourses around the country's petroleum revenue expenditure options leaves a lot to be desired. The Commission is partly to blame for the poor spending of petroleum revenues in the nearly ten years of petroleum production in Ghana. The Petroleum Revenue Management Act, 2011, Act 815 (as amended) requires that spending of petroleum revenues is aligned with the country's long-term development plan, but because the NDPC has been slow in coming up with a development plan, the fall back provision in the Act, which is a discretion given the Minister of Finance to select four out of 12 pre-determined spending areas in every medium term, is what applies.

Of course, the NDPC's location within the presidency makes it dependent on the executive and driven by the political interests and orientation of the president. This has not allowed for consistency in any development policy path over the post-independence period. A recent process to put in place a 40-year development framework for the country has stalled following the 2017 political transition.

1.7 Parliamentary Oversight

Article 75 clause (2) of the 1992 Constitution grants Parliament the power to ratify international treaties and agreements entered into in the name of the Republic.
It provides that: *"A treaty, agreement or convention executed by or under the authority of the President shall be subject to ratification by – (a) Act of Parliament, or (b) a resolution of Parliament supported by the votes of more than one-half of all the Members of Parliament".*

The provision is reinforced by article 181(5) of the same Constitution, which states among others, that the requirement of parliamentary ratification of international loan agreements *"shall, with the necessary modifications by Parliament, apply to an international business or economic transaction to which the Government is a party, as it applies to a loan."*

In spite of this constitutional injunction, Parliament failed to insist on the ratification of the Ghana Gas/SINOPEC Engineering Procurement Construction and Commissioning Contract (EPCC). What is even more disappointing is the fact that, it approved tax waivers contained in the contract, two clear years after the completion of the project, and without seeing the contract, which contained the tax waivers, in the first place.

1.8 Petroleum Agreements and the Performance of Contracts in Ghana's Upstream Oil and Gas Sector

As at 2016 open door, direct negotiation was the sole approach for license allocation in Ghana's upstream petroleum sector. The process was governed by PNDC Law 84 and the Model Petroleum Agreement that was derived from it. The enactment of the new Petroleum (Exploration and Production) Act in 2016, Act 919 changed this, and made Open Competitive Bidding the default process for license allocation.

1.8.1 Open Licensing

In late 2018, the government took a major step towards the implementation of the provisions of Act 919 in respect of open licensing, launching the country's first bid and

In late 2018, the government took a major step towards the implementation of the provisions of Act 919 in respect of open licensing, launching the country's first bid and licensing round.

licensing round. It went on to establish the country's Licensing Bid Rounds and Negotiation (LBRN) Committee and invited Expressions of Interest from IOCs. Six (6) blocks, all in the Tano Cape Three Points (Western Basin) were put on offer. Three (3) blocks were offered through Competitive Tendering, and a block allocated to the National Oil Company (GNPC). The other two blocks were set aside for direct negotiation with competent companies that have a proven track record of work in ultra-deep waters. As at 21st December 2018, a total of sixty (60) applications had been submitted for Pre-Qualification. Out of 14 prequalified companies, only 3 submitted bids.

The Deputy Minister for Energy in charge of Petroleum, Hon. Mohammed Amin Adam, has explained the low level of interest in the country's first-ever bidding round as having been occasioned by inadequate and low quality of data. Another reason he cited as accounting for the low level of interest was the small sizes of the blocks on offer.

However, the CSOs Licensing Working Group, coordinated by the Natural Resource Governance Institute (NRGI) and the Ghana Oil and Gas for Inclusive Growth (GOGIG), and which monitored the licensing round for its compliance with international best practices, has blamed the Ministry's decision to undertake the pre-qualification for both the bid round and direct negotiations at the same time, as reason for the seeming failure of the bid round. According to the group, the approach gave cause for some companies to opt out of the bid round in favour of direct negotiations.

On 21st May 2019, the Minister for Energy conducted a public opening of the bids, with Block GH_WB_03 receiving two bids (one from Tullow Oil Ghana Limited, and the other from ENI Ghana Limited in partnership with Vitol Upstream Ghana Limited). Block GH_WB_02 received a bid from First Exploration and Petroleum Development Limited in partnership with Elandel Energy (Ghana) Limited.

Block GH_WB_04 did not attract any bid. Evaluation of the bids commenced on 22nd May and was concluded on 28th June 2019. The winning bids were announced on 2nd July 2019, and saw First E&P in partnership with Elandel Ghana Ltd. winning Block GH_WB_02, while ENI & Vitol Upstream Ghana Limited won Block GH_WB_03. Negotiations with the winners began soon after the announcement, but are yet to be concluded. The government has, therefore, not entered into any new Petroleum Agreement, following the bid and licensing round.

1.8.2 Contracts Signed and Ratified So Far

Between 2006 and 2019, Ghana signed 18 petroleum agreements with independent companies to explore and produce oil in the country. Almost all of them were negotiated and ratified under PNDC Law 84, with the exception of Springfield West Cape Three Points (Block 2), ENI Ghana Exploration and Production Limited (BLOCK 4) and SWAOCO Onshore/Offshore Keta Delta Block, which were ratified in 2016.

Three of the blocks out of the 18 are currently producing – i.e., Deep Water Tano, West Cape Three Points and Offshore Cape Three Points.
In 2018, ExxonMobil Exploration and Production Ghana Ltd. acquired the rights to operate the Deep-Water Cape Three Points block and received parliamentary ratification in April 2019.

Fourteen of the Petroleum Agreements cover exploratory and non-producing blocks. Again, 14 of these contracts are in the western basin and the remaining are in the Keta Basin. Despite the number of available active contracts, Ghana's hydrocarbon potential is seriously under-explored.

For instance, even in the busy areas of the western basin, the existing contracts constitute about 20 percent of the over 36,000 square kilometres of offshore and 103,600 square kilometres of onshore acreages. This underscores the need to balance investment attraction and fiscal intake to improve investment in the upstream sector of the petroleum industry.

Between 2006 and 2019, Ghana signed 18 petroleum agreements with independent companies to explore and produce oil in the country.

The table below gives an overview of the 18 active petroleum agreements

Table 1: Existing Petroleum Agreements in Ghana

01 **Contract Area:** Deep Water Tano
Operators: Tullow Ghana Limited (35.48% interest in block)
Other Contracting Parties: Anadarko Petroleum Corporation (24% Interest); Kosmos Energy Ghana HC (24% Interest); PetroSA Ghana Limited (2.52% Interest); Ghana National Petroleum Corporation (GNPC) (14% Interest)
Effective Date: March 10, 2006

02 **Contract Area:** West Cape Three Points
Operators: Tullow Ghana Limited (25.66% interest)
Other Contracting Parties: Kosmos Energy Ghana HC (30.02% interest); Anadarko Petroleum Corp. (30.02% interest); PetroSA Ghana Limited (1.80% interest); GNPC (12.5% interest)
Effective Date: July 22, 2004

03 **Contract Area:** Offshore Cape Three Points
Operators: ENI Ghana Exploration & Production Limited (47.22% interest)
Other Contracting Parties: Vitol Upstream Ghana Limited (37.78% interest); GNPC (15% interest)
Effective Date: May 5, 2008

04 **Contract Area:** Deep Water Tano/Cape Three Points
Operators: Aker Energy Ghana Limited (50% interest) Initially, Hess Ghana Exploration Limited (40% interest) was the operator. *Hess Ghana sold their interests to Aker Energy Ghana in 2018.
Other Contracting Parties: Lukoil Overseas Ghana Limited - 38% interest); Fuel Trade Exploration and Production Limited (2% interest); GNPC (10% interest)
Effective Date: July 19, 2006

05 **Contract Area:** Cape Three Points Block 4
Operators: ENI Ghana Exploration & Production Limited (42.47% interest)
Other Contracting Parties: Vitol Upstream Tano Limited (33.98% interest); Woodfields Upstream Limited (9.56%interest); GNPC (10% interest); GNPC Exploration and Production Company (EXPLORCO) (4% interest)
Effective Date: April 14, 2016

06 **Contract Area:** Central Tano Block
Operators: Amni International Petroleum Development Company (Ghana) Limited (90% interest)
Other Contracting Parties: GNPC (10% interest)
Effective Date: March 21, 2014

07

Contract Area: Deepwater Cape Three Points West Offshore
Operators: Eco Atlantic Oil and Gas (50.42% interest)
Other Contracting Parties: A-Z Petroleum Products Ghana Limited (27.88% interest); Petrogulf Limited (4.35% interest); GNPC EXPLORCO (4.35% interest); GNPC (13% carried interest)
Effective Date: March 22, 2015

08

Contract Area: East Cape Three Points
Operators: Medea Development Limited (36% interest)
Other Contracting Parties: Cola Natural Resources (54% interest); GNPC (10% interest)
Effective Date: December 4, 2013

09

Contract Area: East Keta Offshore
Operators: GNPC Operating Services Company Limited (GOSCO) (11% interest)
Other Contracting Parties: Heritage Exploration and Production Ghana Limited (38.7% interest); Blue Star Exploration Ghana Limited (38.7% interest); GNPC EXPLORCO (11.6% interest)
Effective Date: February 05, 2015

10

Contract Area: Expanded Shallow Water Tano
Operators: Erin Energy Ghana Limited (60% interest)
Other Contracting Parties: GNPC EXPLORCO (25% interest); Base Energy Limited (15% interest); GNPC (10% interest)
Effective Date: January 23, 2015

11

Contract Area: West Cape Three Points Block 2
Operators: Springfield E&P Limited (New Discoveries (84%); Existing Discoveries (82%) interest)
Other Contracting Parties: GNPC (New Discoveries (11%); Existing Discoveries (8%) interest); GNPC EXPLORCO (New Discoveries (5%); Existing Discoveries (10%))
Effective Date: July 26, 2016

12

Contract Area: Offshore South West Tano
Operators: GOSCO (12% interest)
Other Contracting Parties: Heritage Exploration and Production Ghana Limited (39.60% interest); Blue Star Exploration Ghana Limited (39.60% interest); GNPC EXPLORCO (8.8% interest)
Effective Date: February 5, 2015

13

Contract Area: Onshore/Offshore Keta Delta Block
Operators: AGM Petroleum Ghana Limited (66% interest)
Other Contracting Parties: Ghana National Petroleum Corporation (10% interest); GNPC EXPLORCO (24% interest)
Effective Date: January 24, 2014

14

Contract Area: South Deepwater Tano
Operators: Eco Atlantic Oil and Gas (50.42% interest)
Other Contracting Parties: A-Z Petroleum Products Ghana Limited (27.88% interest); Petrogulf Limited (4.35% interest); GNPC EXPLORCO (4.35% interest); GNPC (13% carried interest)
Effective Date: March 22, 2015

15

Contract Area: South West Saltpond
Operators: Brittania-U Ghana Limited (76% interest)
Other Contracting Parties: Hills Oil Marketing Company Limited (4% interest); GNPC (20% interest)
Effective Date: July 17, 2014

16

Contract Area: Shallow Water Cape Three Points
Operators: Sahara Energy Fields Ghana Ltd (85% interest)
Other Contracting Parties: GNPC (10% Interest); Sapholda E&P Limited (5% Interest)
Effective Date: July 17, 2014

17

Contract Area: Offshore Cape Three Points South
Operators: UB Resources Limited (70.47% interest)
Other Contracting Parties: Royalgate GH Limited (4.35% interest); Houston Drilling Management GH Limited (12.18% interest); GNPC (13% interest)
Effective Date: September 17, 2014

18

Contract Area: Deepwater Cape Three Points
Operators: ExxonMobil Exploration and Production Ghana (Deepwater) Limited (80% interest)
Other Contracting Parties: GOIL Offshore Ghana Limited (5% interest); GNPC (15% interest)
Effective Date: November 28, 2018

Data Source: Ghana Petroleum Register

An analysis of the existing petroleum agreements reveals that, most of the contractors have not delivered on the minimum contractual obligations in the Petroleum Agreements signed with Ghana.

1.9 Performance of Petroleum Agreements in Ghana

The Petroleum Agreements (PA) obliges companies to engage in exploration between six (6) to seven (7) years. To ensure that contractors deliver on the terms of the PAs, this time-frame is divided into three phases, i.e., initial, first extension and second extension phases. A contractor is obligated to satisfy the minimum requirements for a phase as a prerequisite to transition to the next phase.

This is to prevent contractors from holding on to blocks for speculative reasons, and to deter inactivity on the blocks. Failure to satisfy the minimum work obligations should attract a sanction in the form of payments to GNPC. In the same vein, if the contractor delivers more than was expected for a phase, the contractor is credited with the extra delivery in the extended phase.

An analysis of the existing petroleum agreements reveals that, most of the contractors have not delivered on the minimum contractual obligations in the Petroleum Agreements signed with Ghana. Unfortunately, some of the companies have been given extensions without paying any penalties for the inactivity on their blocks.

This analysis excludes the three producing contract areas and is limited to the non-producing and exploratory contract areas, excluding the Deepwater Cape Three Points Block acquired by ExxonMobil which received parliamentary ratification in April 2019.

1.9.1 Expanded Shallow Water Tano

This block is operated by Erin Energy Ghana Ltd with GNPC Explorco, Base Energy, and GNPC as contracting parties. The minimum contractual obligations for its initial phase of exploration was to spend at least US$30 million, reprocess existing 2-D seismic data and acquire 1,500sq/km of 3-D seismic data, as well as drill one exploration well. The initial exploratory phase was for two (2) years from the effective date of 23rd January 2015. The block was, however, affected by the Preliminary ruling of the International Tribunal for the Law of the Sea (ITLOS) which placed a moratorium on drilling new wells in the disputed area. The company got a two (2) year extension to continue working on the block after the final ITLOS ruling, which went in Ghana's favour.

The contractor has, however, not fulfilled the minimum work obligation even after extension to accommodate the ITLOS injunction. The contractor has not drilled any wells and the minimum required expenditure on the block has not been satisfied.

1.9.2 Central Tano Block

The Central Tano Block is operated by Amni International Petroleum Development Company (Ghana) Limited with GNPC as its contracting party. The company's minimum contractual obligations for the initial phase of exploration on the block were to spend US$150 million and license 3-D seismic data over the Contract Area (about 277.9 sq.km); and drill two (2) exploration wells.

The contract area also falls within the area affected by the ITLOS moratorium. However, before its initial exploration period ended in 2018, the company's exploration period was extended in 2016 to 2020. the contractor has failed to deliver on the terms of the but continue to hold on to the block.

1.9.3 Deep Water Tano Cape Three Points

TThis block was, initially, operated by Hess Ghana Exploration Limited with Lukoil Overseas Ghana Limited, Fuel Trade Exploration and Production Limited and GNPC as contracting parties. The contractors made a discovery in the Pecan field and appraised the field with five reservoir penetrations. They could, however, not progress to develop the field because of the ITLOS preliminary injunction.

In 2018, Aker acquired the interests of Hess in the block and proceeded to complete appraisal studies. In all, seven (7) successful exploration wells and eight (8) appraisal wells have been drilled on the block. Aker submitted a Plan of Development (PoD) for the field to the government in March

A contractor is obligated to satisfy the minimum requirements for a phase as a prerequisite to transition to the next phase.

2019. This was, however, not approved, and the PoD had to be revised and re-submitted before it was finally approved by the end of 2019. In March 2020, Aker suspended its final investment decision on the development of the Pecan field due to the devastating effects of Covid-19 on upstream oil and gas business.

1.9.4 South Deepwater Tano

The South Deepwater Tano block is operated by AGM Petroleum Ghana Limited with GNPC Explorco and GNPC as contracting parties. The minimum contractual obligations for the initial phase of exploration included a minimum expenditure of $259 million; acquisition, processing and interpretation 750 square kilometres of 3-D seismic data, and drill a minimum of two (2) exploration wells.

This block was also affected by the ITLOS injunction. Consequently, the contractor got extension into the second phase in 2016. In 2017, the contractor reported it was analysing 2D seismic data with plans to acquire 3D data. The minimum contractual obligation was not satisfied even after the extension to accommodate the ITLOS injunction.

Petrica Holding AS which is controlled by Mr. Kjell Inge Rokke, a driving force in the development of the Aker Group since the 1990s, acquired AGM Petroleum Ghana Ltd., and, subsequently, renegotiated the fiscal terms of the agreement and a new minimum work obligation. The contractor moved to site after the renegotiation and undertook first exploratory drilling which encountered oil deposits in 2019- the Nyankom-X1 discovery. The contractor submitted appraisal programme for the discovery in 2020 but this was impacted by Covid.

1.9.5 Offshore South West Tano Block

This block is operated by GNPC Operating Services Company Limited (GOSCO) with Heritage E&P, GNPC EXPLORCO and Blue Star Exploration Ghana Ltd. as contracting parties. From the effective date of 5th February 2015, the minimum initial contractual obligations included a minimum expenditure of US$32 million, reprocessing of up to 175 square kilometres of 3-D data and drilling of one (1) exploration well. The initial exploration phase was 2.5 years. Even though the block was not affected by the ITLOS injunction, the initial exploration period was extended by two (2) years to August 2019. The contractor has, however, failed to fulfil the minimum contractual obligations even after the two (2) years' extension.

1.9.6 Shallow Water Cape Three Points

This block is operated by Sahara Energy Fields Ghana Ltd. with GNPC and Sapholda E&P Limited as contracting parties. The Petroleum Agreement (PA) came into effect in July 2014 with an initial exploration phase of three (3) years. Within the initial exploration phase, the contractor was required to spend a minimum of US$32 million, conduct geological and geophysical studies and drill one (1) exploration well. The contractor has defaulted in its work and financial obligations. The initial period ended in July 2017. This block has consistently failed to deliver of the minimum work obligation. Surprisingly the contractor continues to hold on to the block.

1.9.7 East Cape Three Points

This block is operated by Medea Development Ltd. and has GNPC and Cola Natural Resources as its contracting parties. From its effective date in September 2013, the contractor was required to spend a minimum of US$25 million, acquire 1,200 square kilometres of 3-D seismic data, conduct geological and geophysical studies and drill one (1) exploration well. The initial exploration period was three (3) years from the effective date of the PA. The contractor acquired 3-D seismic data and got a one (1) year extension to process the data and drilled the required exploratory well by September 2017. After four (4) years of holding on to the block, the contractor has failed to fulfil its minimum contractual obligations, yet the contractor continue to hold on to the block.

List of Performing blocks:

- *Deep Water Tano/Cape Three Points*
- *Cape Three Point block 4*
- *South Deep water Tano*
- *West cape Three Point Block 2*

1.9.8 South West Saltpond Block

Brittania-U Ghana Limited is the operator of this block, with Hills Oil Marketing Company Limited and GNPC as contracting parties. The PA came into effect with an initial exploration phase of three (3) years. The minimum contractual obligations included a minimum expenditure of US$40 million, reprocessing of 800 square kilometres of existing 2-D seismic data, acquiring and processing 1,500 square kilometres of new 3-D seismic data, and drilling of one (1) exploration well.

In spite of failure to fulfil the contractual obligations, the contractor got an extension of 27 months beyond the initial exploration phase. However, till date, the contractor has not met the minimum contractual obligations. According to the Petroleum Commission, the contractor undertook minimal Geological and Geophysics (G&G) studies in 2019. The Work Programme and budget for 2020 was not submitted before the Covid-19 became another excuse fro most contractors.

1.9.9 Cape Three Points Block 4

This block is operated by ENI with Vitol, Woodfields, GNPC EXPLORCO, and GNPC as its contracting parties. From the effective date of April 2016, the contractor had three (3) years for its initial exploration period. Within this period, the contractor was required to spend a minimum of US$45 million on the contract area, acquire, process and interpret 1,000 sq./km of 3-D seismic data and drill one (1) exploration well.

The contractor completed its drilling towards the end of the initial exploratory phase and made a discovery of gas and condensate. The contractor will undertake further drilling in 2021 before appraisal programe is submitted to the Commission.

1.9.10 Onshore/Offshore Keta Delta Block

This block is operated by Swiss African Oil Company Ltd with GNPC and Pet Volta Investments Ltd. as its contracting parties. From the effective date in April 2016, the contractor had three (3) years for its initial exploration period. Within this period, the contractor was required to spend a minimum of US$40 million, acquire, process and interpret 1,100 square kilometres of 2-D seismic data and drill one (1) exploration well.

The contractor had been engaged in Environmental Impact Assessment, and interpreting seismic data. The Contractor did not undertake any activity in 2019 citing a dispute with vegetable farmers and some inhabitants in the vicinity of the block as a cause of the inactivity.

1.9.11 Offshore Cape Three Points South Block

This block is operated by UB Resources Ltd with Royalgate GH Limited, Houston Drilling Management GH Limited and GNPC as its contracting parties. From the effective date in July 2014, the contractor had three (3) years for its initial exploration period. Within this period, the contractor was required to spend a minimum of US$80 million, license and reprocess existing 600 square kilometres of 3-D seismic data, acquire and reprocess new seismic data (if deemed necessary) and drill one (1) exploration well.

A year's extension was granted in August 2016 to enable the contractor to complete all of its outstanding obligations by September 2018. However, the contractor has not drilled any well, and has failed to fulfil its minimum contractual obligation. In 2019 and 2020 the contractor did not submit work programme nor undertake any activity on the block.

1.9.12 Deepwater Cape Three Points West Offshore

This block is operated by Eco-Atlantic Oil and Gas, with A-Z Petroleum Products Ghana Limited, Petrogulf Limited, GNPC EXPLORCO and GNPC as its contracting parties. From the effective date in March 2015, the contractor had two and half (2.5) years for its initial exploration period. Within this period, the contractor was required to spend a minimum of US$65 million, license and reprocess existing 850 square kilometres of 3-D seismic data relating to the contract area, reprocess 850 square kilometres of 3-D seismic data, and drill one (1) exploration well.

An eighteen (18)-month extension was granted in August 2016 to enable the contractor to complete all of its outstanding obligations by March 2019. The contractor has only been able to license existing 2-D and 3-D seismic data over the block, and commenced reprocessing of seismic data after holding on to the block for over four (4) years. The contractor submitted work programme for 2020 which included first exploratory drilling but subsequently informed the Commission of its intention to suspend its programme because of Covid-19.

1.9.13 West Cape Three Points Block 2

The block is operated by Springfield E&P (an indigenous Ghanaian Company) with GNPC EXPLORCO, and GNPC as its contracting parties. From the effective date of July 2016, the contractor had two-and-half (2.5) years for its initial exploration period. Within this period, the contractor was required to spend a minimum of US$30 million, conduct geological and geophysical studies and drill one (1) exploration well.

The contractor inherited existing discoveries in the contract area and was required to undertake an evaluation of the existing discoveries and submit an Appraisal Programme for approval within a period of nine months from the effective date. The initial exploration period was supposed to end in July 2018, but had been extended to 2021, barely six months into the initial exploration phase. The contractor completed its exploration drilling and made oil discovery in 2019. The contractor is currently in dispute with OCTP partners for unitization of the two blocks after the drilling success close to the OCTP block. Appraisal of the discovery has not yet been done.

1.9.14 East Keta Offshore

This block is operated by GNPC Operating Services Company Limited (GOSCO) with Heritage E&P, GNPC EXPLORCO, and Blue Star Exploration Ghana Ltd. as contracting parties. From the effective date of February 2015, the contractor had two (2) years for its initial exploration period. Within this period, the contractor was required to spend a minimum of US$15 million, reprocess existing 2-D seismic data and acquire 1,500 square kilometres of 3-D seismic data. The contractor had made efforts to reprocess existing data and license 2-D data on the area, but faced difficulties. Consequently, a two (2)-year extension was granted to enable the contractor to complete all of its outstanding obligations by October 2018. The extended period has also expired, and the contractor has not fulfilled its minimum contractual obligation.

1.10 Implications of Inactivity on the Blocks

Many of the oil blocks are not performing in accordance with the terms. Assessment of the performance on the blocks show that only four of the contract areas under exploration and development are performing; Deep Water Tano/Cape Three Points, Cape Three Point block 4, South Deep water Tano and West cape Three Point Block 2. At the same time, there appears political patronage of this nonperformance which continues to affect exploratory actives in Ghana. Commitments of government to abrogate and re-award the blocks has been frail. This has allowed contractors to hold on to the blocks without sanctions, which are clearly articulated in the contracts.

While it may not be easy to establish the exact cost to Ghana from the inactivity of the companies, the opportunity cost of possible early discoveries on those blocks defer potential revenues to the country, and, consequently, developmental outcomes from the revenues. The country also defers other attendant bene¬fits, such as employment, linkages with the rest of the economy and bene¬fits to the GNPC who participate in all contracts free from exploration cost with a mandate to learn through the process to become a viable entity capable of venturing into exploration and production with the experience gained.

1.11 Local Content and Local Participation

There is no denying the fact that, all over the world, countries that have been able to optimise the benefits from their natural resources are those who are themselves active participants in the exploitation of these resources. The level of participation and the approach to securing opportunities for nationals in the exploitation of their own resources have, in the last three decades, become a matter of intense policy discourse. Recent trends show a strong tendency for countries to develop deliberate policies and strategies for increasing their participation in their natural resources sector, a move strongly supported by the Natural Resource Charter and the Africa Mining Vision.[4]

Assessment of the performance on the blocks show that only four of the contract areas under exploration and development are performing; Deep Water Tano/Cape Three Points, Cape Three Point block 4, South Deep water Tano and West cape Three Point Block 2.

Countries make their strategic choices on where they want to focus more attention, leading them to specialise in particular links of the industry value-chain. Most of the literature on local content, however, recommends efforts to ensure benefit maximisation across the entire value-chain of natural resource exploitation. This means, countries will have to build capacity where it is lacking, and the obligation for the transfer of knowledge, skills and technology should be key considerations in the negotiation of Petroleum Agreements.

Many oil-producing countries choose to approach their local content goals through target-setting. This, experts say, is a better approach as it lends itself to the tracking of progress over time. The Nigerian Content Development Act, which received presidential assent on 2nd April 2010, for instance, requires a minimum of 95% of managerial, professional and supervisory grades of oil and gas companies to be Nigerians, 100% of risk insurance to be taken out with insurers registered in Nigeria, 100% of legal services to be secured from Nigerian legal practitioners.

East Timor, however, deviates from this approach by stating its strategic objective rather broadly to include among others, maximisation of the positive contribution from the petroleum sector; ensuring that the petroleum sector benefits the Timorese people in a sustainable way, through petroleum-related industrial growth, education and increased national wealth.

Ghana also goes along the path of target setting, but also provides in general terms that, the policy objective is to give first consideration to Ghanaian independent operators in the award of oil blocks, oil field licenses, oil lifting licenses, and in all projects for which contract is to be awarded in the Ghanaian oil and gas industry.

However, a major weakness, many local content policies tend to suffer is that strong market forces already operate in what is largely a globally-sourced industry. Set in the context of global sourcing in the oil industry, a nation's local content participation and capability development programmes can be undermined by WTO procurement rules even though the 'merit good', a privilege for citizens and firms within poorer countries, can be invoked to discriminate against international competition under WTO Special and Differential Treatment (SDT) measures for developing countries, relating to the Agreement on Trade-Related Investment Measures (TRIMS).

The strongest local participation policy is probably that which promotes joint ventures between national and international firms, either at the operator level or within the higher end of the supply chain, as is the case in Nigeria and Trinidad and Tobago regarding engineering design work.
A number of governments propose that local content capture is only likely to be achieved by consciously building the capability of national and local skills to access the opportunities. This is termed local capability development.

It places a considerable burden on oil and gas operating companies, including:

Direct and prolonged technical assistance to national and local suppliers to improve quality and reliability (or facilitating this assistance though additional payments to lead engineering contractors to carry through the same type of capacity building);

Payment of premiums or subsidies to overcome some of the higher costs incurred in capabilities development. Oil giant, BP Trinidad and Tobago recently contributed US$9.5 million to enable the engineering design and fabrication of off-shore gas platforms within the host country, instead of the United States.

4 The Natural Resource Charter is a global initiative to assist governments of resource-endowed countries to effectively govern their resources in a way that generates economic growth, promotes the welfare of the population and environmental sustainability.
The Africa Mining Vision on the other hand, is an Africa Union recommended set of principles for improving the development outcomes of natural resource extraction.

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Ghana's Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I 2204) just like that of Trinidad and Tobago, was passed to promote the maximisation of value-addition and job-creation through the use of local expertise, goods and services, business and financing in the petroleum industry value chain and their retention in the country. The Regulations also seek to develop local capacities in the petroleum industry value chain through education, skills transfer and expertise development, transfer of technology and know-how and active research and development programmes; achieve the minimum local employment level and in-country spend for the provision of goods and services in the petroleum industry value chain, among others.

The Regulations also grant indigenous Ghanaian companies first preference in the grant of a Petroleum Agreement or a license concerning petroleum activities, and at least a five percent equity participation of an Indigenous Ghanaian Company (IGC) other than the Corporation to be qualified to enter into a petroleum agreement or a license.

According to research by the African Centre for Energy Policy (ACEP)[5], though existing literature and data from the Petroleum Commission shows that the country is on course to achieving local content targets on employment and supply of good and services in non-technical areas, there is little evidence on how Indigenous Ghanaian Companies (IGCs), in particular, are taking advantage of mandatory minimum equity participation to embrace technical roles and become as competitive as expected. Data from the Petroleum Commission show that, as at April 2019, only 51 IGCs, representing seven percent of the 701 companies, held valid contracts to supply technical services to operators.

According to ACEP, the barriers to indigenous participation were financial and market-related challenges. Financial challenges stemmed from limited financing options and high lending rates offered by financial institutions. The market-related challenges resulted from inactivity over oil blocks and the cost, as well as the risks in participating in the sector. IGCs were also found not to be collaborating among themselves in the sector. Again, there was the problem of inadequate knowledge concerning the sector both in technical and non-technical activities. Other issues, such as the lack of properly designed corporate governance structures and fronting, were also seen as barriers to IGC participation.

Again, there have been concerns about L.I 2204, which prescribes quantitative targets for various positions, goods and services, divided into three broad periods to be achieved towards a global 90% target. The law was passed after most of the Jubilee contracts were awarded, as a result of which the Petroleum Commission has had a challenge in reaching an accommodation with the International Oil Companies (IOCs) on how to proceed. The challenge has been how to proceed without being seen to be implementing the law retroactively[6].

1.12 Industry Response to Policy Positions and Policy issues

The industry's response to Ghana's oil and gas policy and regulatory framework has been sporadic and largely uncoordinated. In 2013, while the country's Local Content Regulations were going through the process of passage, subtle attempts were made by some of the IOCs to dilute its provisions. Acting under the banner of the E&P Forum, these companies called for the decriminalisation of fronting in the Ghanaian oil and gas industry, a sentiment that was subsequently echoed by the then U.S. ambassador to Ghana.

5 ACEP (2019), Boosting Indigenous Ghanaian Companies' Participation in Technical areas of Ghana's Upstream Oil and Gas Industry: A lesson study

6 Manteaw, S,, 2017, Unleashing the Growth Potential of Oil and Gas - Institutional Challenges and Barriers to Indigenous Participation in the Sector. A briefing paper prepared for the Ghana Energy Summit, 2017.

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It took Ghanaian CSOs to ward off the intrusion. The Civil Society Platform on Oil and Gas (CSPOG) had the occasion to caution the IOCs against undermining the passage of the Regulations. The group said in a press statement[7], read on its behalf on 10th November 2013, by Dr Jemima Nunoo, that it had gathered intelligence to the effect that some individual IOCs were attempting to lobby Ghanaian Parliamentarians to make changes to the draft Regulations.

The efforts of these companies, the statement said, had been given impetus by the United States Ambassador, who in a public statement, had argued that, ***"Ghana's local content law in the oil and gas sector would make it difficult for the country to attract the needed foreign capital, technology and expertise".***

In response, the CSPOG's statement noted: ***"We do not believe that, the concerns so far raised by the companies, through their lobby platform, the E&P Forum, are strong enough to warrant a withdrawal of the Oil and Gas Local Content LI, and we are happy that the Select Committee on Subsidiary Legislation shares this view."***

Unlike the mining sector, players in Ghana's oil and gas industry have mostly dealt with their issues and concerns at individual levels rather than as a collective. From the early years when Kosmos had to litigate the government's claim to a 'right of first refusal' as the latter attempted to sell its stake in Jubilee to ExxonMobil, through the contest of attempts by the Government of Ghana to impose penalties for environmental breaches, on its own, the industry has found it necessary to come together to build on the initiative of the E&P Forum to form an association, the Ghana Upstream Petroleum Chamber (GUPC), to champion their cause. Even so, the international oil companies have not managed to completely cede grounds for the GUPC to speak for them.

At the Multi-Stakeholder Group overseeing Ghana's implementation of the Extractive Industry Transparency Initiative (EITI), the producing oil and gas companies continue to represent themselves, with GUPC playing on the fringes. In 2019, Tullow Oil faced several challenges, some of which arose from a government policy decision to forgo gas from Jubilee in favour of the 'Take or Pay' gas from the Sankofa Gye Nyame (SGN) field. This led to reinjection of substantial gas from Jubilee and, in the process, compromised oil supply volumes, but Tullow had to contend with its problems alone.

Until the onset of the COVID 19 pandemic, the boom and bust cycles of the oil and gas industry globally, did not, at any time, lead to significant downturns in Ghana. The ability of the Ghanaian industry to withstand global price shocks may be due to regulatory certainty and the promise held by future industry prospects. This is, however, changing, as Aker Energy has recently announced suspension of its Ghana project, citing the effects of the COVID 19 pandemic[8].

7 https://www.myjoyonline.com/business/stay-off-local-content-bill-civil-society-warns-oil-companies/
8 https://www.offshore-technology.com/news/aker-energy-ghana-cancel-pecan/

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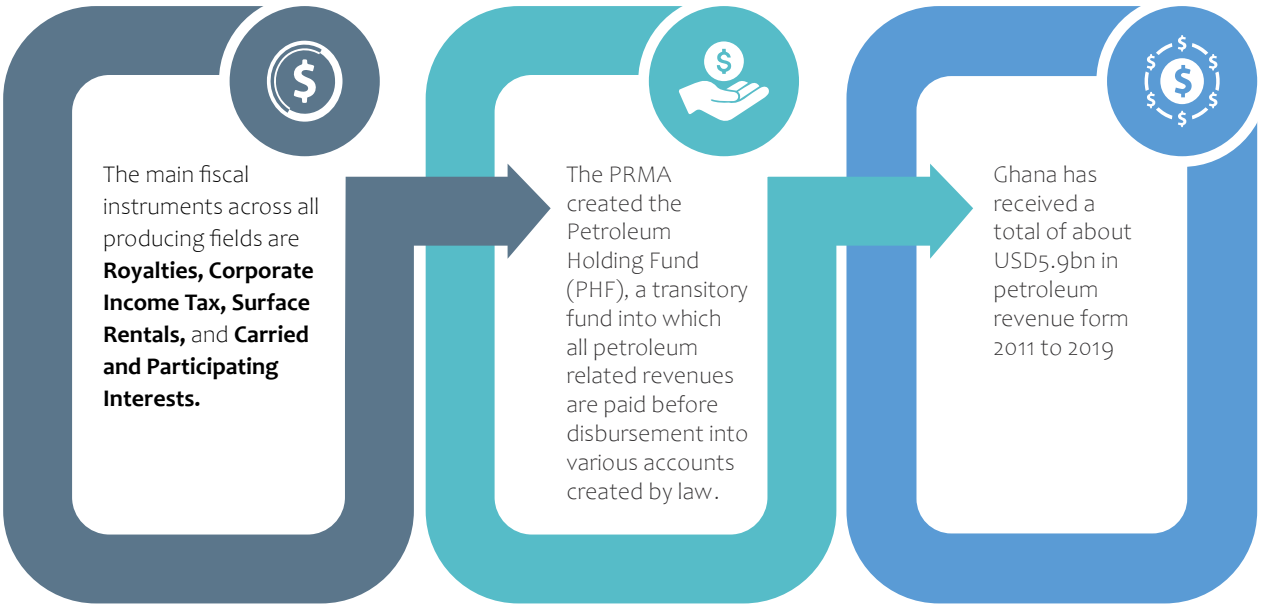
2.0

Financial Overview of Ghana's Upstream Oil and Gas Sector



2.1 Fiscal Regime of Ghana

The Petroleum (Exploration and Production) Act, 2016 (ACT 919), and the Income Tax Act, 2015 (Act 896) detail the fiscal regime and revenues to be paid to the country. However, revenues from current oil-producing fields are governed by the Petroleum (Exploration and Production) Act (PNDCL 84) and the Petroleum Income Tax Act (Act 896, 2015).

Beyond these laws, Petroleum Agreements (PAs) provide more specific definitions of fiscal elements that are negotiated between the state and the companies. The main fiscal instruments across all producing fields are Royalties, Corporate Income Tax, Surface Rentals and Carried and Participating Interests.

Royalties

This is an entitlement of the country to a percentage of gross production. Ghana's royalty interests in the three producing fields are 5 percent from the Jubilee and TEN Fields and 7.5 percent from the Sankofa Gye Nyame (SGN) Field.

Carried and Participating Interest (CAPI)

The fiscal regime provides for free carried interest. This is an interest held by the state without contributing to exploration costs. In the three producing fields, the free carried interest for Ghana is 10 percent for Jubilee and TEN fields, and 15 percent for the SGN field. The contract also provides additional interest which the state can opt for after a commercial discovery is made. This is 3.64 percent

in the Jubilee Field and five percent for the TEN and SGN fields.

Corporate Income Tax

Companies are required to pay income tax annually. Corporate Income Tax on upstream and midstream petroleum companies is 35 percent of net profit as required by the petroleum agreements.

Surface Rentals/Acreage fees

This revenue accrues to the country from charging companies for the occupation and use of petroleum blocks belonging to the State. The fees range from $30 to $200 per square kilometre, depending on the petroleum agreement and the phase of operation of the block.

Additional Oil Entitlements (AOE)

This is determined on the basis of the after-tax inflation adjusted rate of return on each field. The AOE is a windfall tax to the government and is determined by the terms of the petroleum agreement.

2.2 Petroleum Receipts

The Petroleum Revenue Management Act (PRMA), 2011 (Act 815) sets up the framework for the collection, allocation and utilization of petroleum receipts. Based on the fiscal regime outlined in Section 2.1, Ghana has received a total of about US$5.9 billion in petroleum revenues from 2011 to 2019 from the various sources as presented in Table 2.

Royalties, Carried and Participating Interests and Corporate Income Tax are the three main fiscal instruments that inform the value obtained over the period. Of the $5.9 billion, the share of Carried and Participating Interest was about 59.5 percent, while that of Royalties and Corporate Income Tax were about 24.4 percent and 15.9 percent, respectively.

(see Figure 2).

Figure 2: Percentage Distribution of Petroleum Revenue Sources.

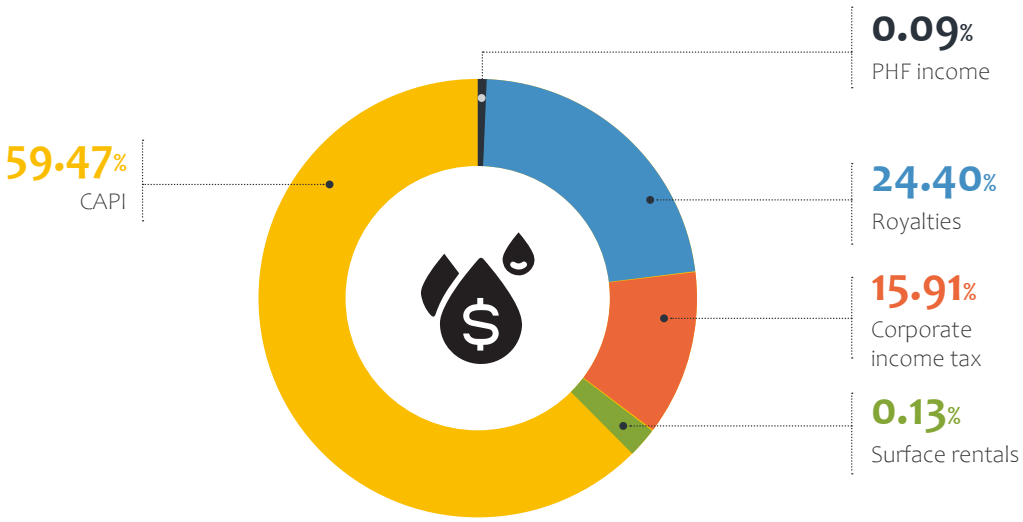
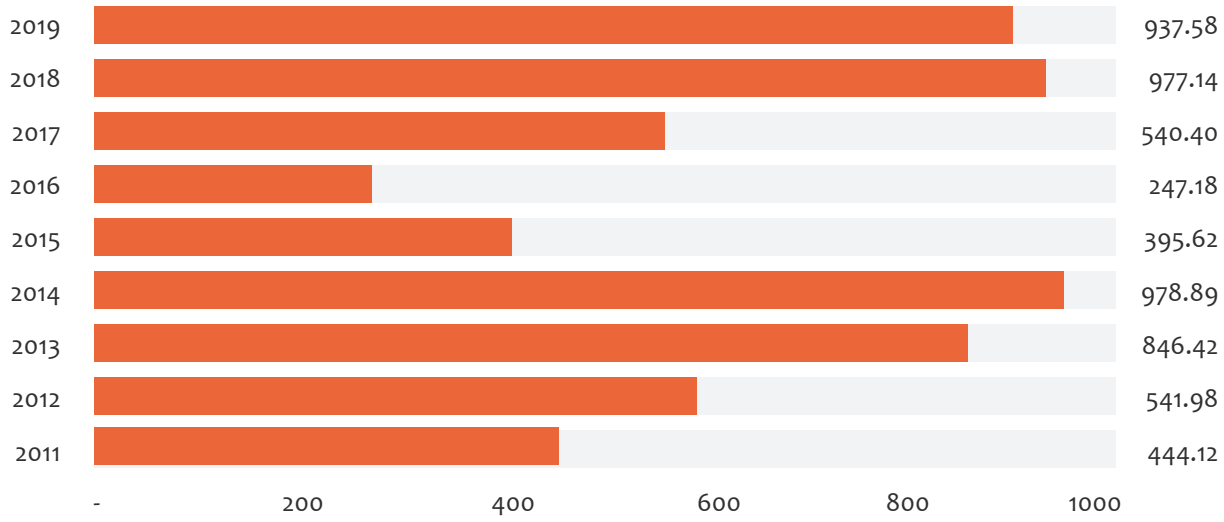


Table 2: Total Annual Petroleum Receipts from Revenue Sources in US$ millions (2011-2019).

Years	Royalties (Jubilee/TEN/ SGN/Gas/ SOPCL) (US$ million)	Corporate Income Taxes (US$ million)	Surface Rentals (US$ million)	Carried and Participating Interest (Jubilee/TEN/ SGN/Gas) (US$ million)	Petroleum Holding Fund Income (US$ million)	Total (US$ million)
2011	122.17	-	-	321.95	-	444.12
2012	150.98	-	0.57	390.43	-	541.98
2013	175.18	216.99	0.68	453.57	-	846.42
2014	192.81	284.55	1.78	499.33	0.12	978.89
2015	104.21	20.41	0.47	270.08	0.031	395.62
2016	58.23	29.55	0.47	158.86	0.073	247.18
2017	135.86	36.98	1.57	365.44	0.62	540.47
2018	265.61	160.61	0.939	548.34	1.64	977.14
2019	236.79	191.14	1.11	505.99	2.55	937.58
Total	**1441.84**	**940.23**	**7.60**	**3513.99**	**5.03**	**5909.39**

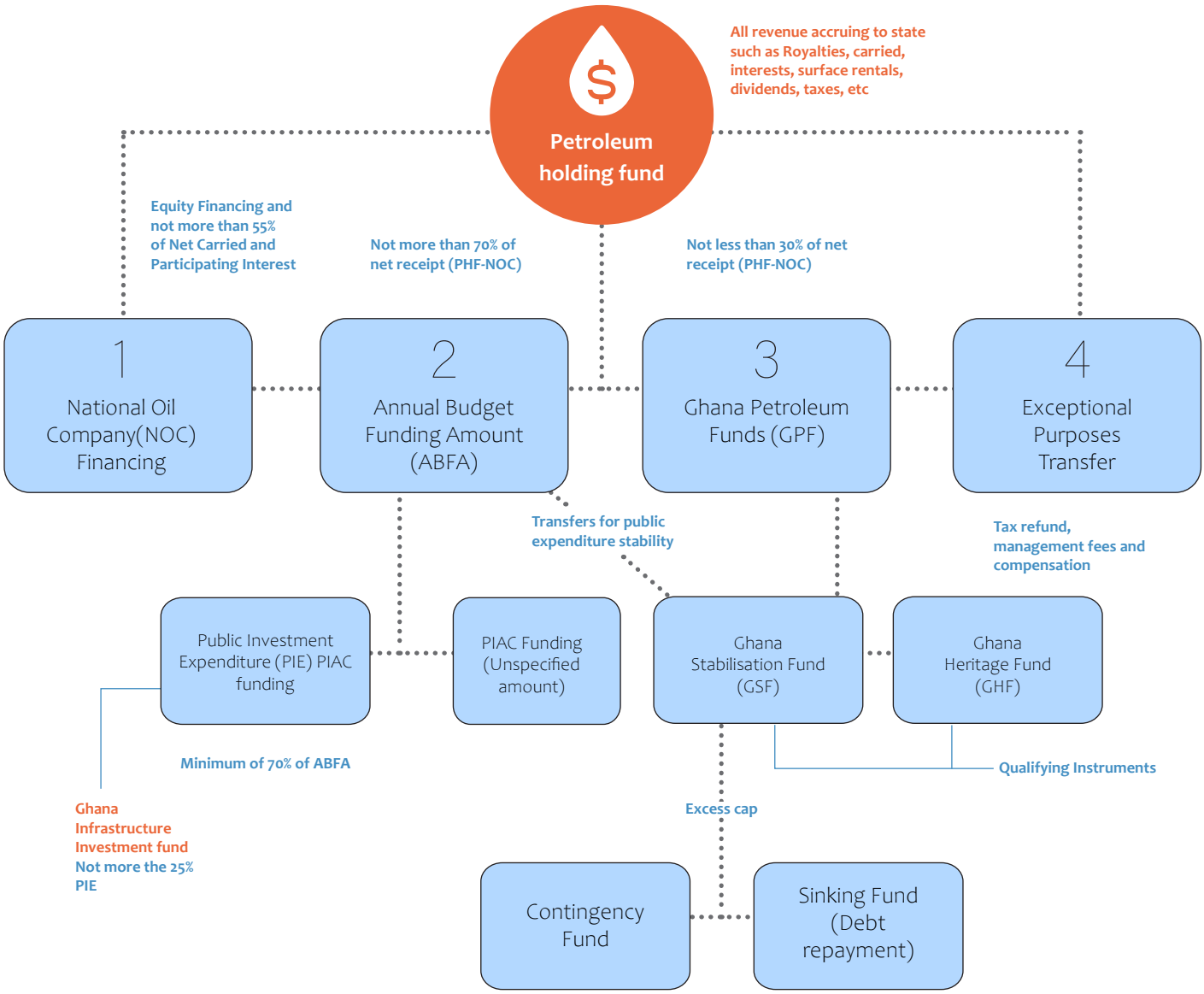
Data Source: Annual Petroleum Reports; PIAC Reports.



2.3 Petroleum Revenue Allocation Framework

The PRMA created the Petroleum Holding Fund (PHF), a transitory fund into which all petroleum related revenues are paid before disbursement into various accounts created by law. The law prioritizes allocation to GNPC for their equity financing cost and the operations and investments of the Corporation. The balance of the PHF after deducting the allocation to GNPC (Benchmark Revenue) is disbursed into two accounts: the Annual Budgeting Funding Amount (ABFA), and the Ghana Petroleum Funds (GPFs). The ABFA receives up to 70 percent of Benchmark Revenue while GPF receives a minimum of 30 percent of the Benchmark Revenue. ABFA is earmarked to support government expenditure in the fiscal year. Allocation to the Ghana Petroleum Funds is further divided into two accounts: the Ghana Heritage Fund (GHF) and the Ghana Stabilisation Fund (GSF) for the respective purposes of saving for the

Figure 3: The PRMA's framework for petroleum revenue collection and distribution[9]



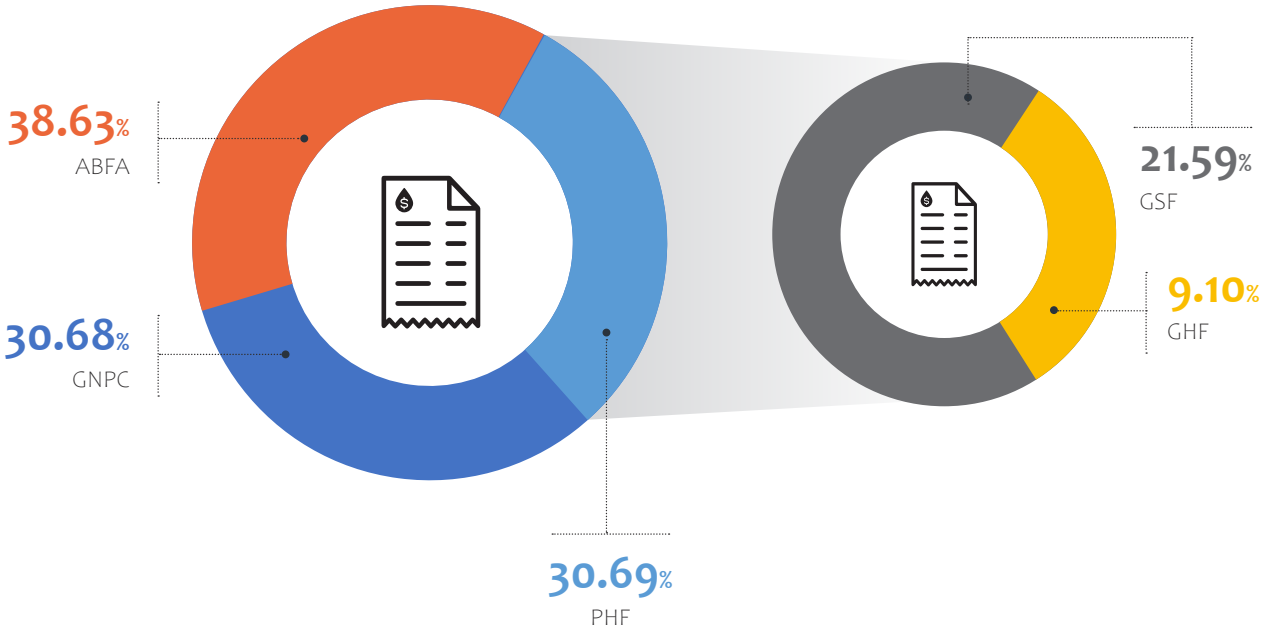
9 Sackey, J.A. (2018). Petroleum Revenue Management Manual. Africa Centre for Energy Policy, p. 30. Available at https://s3.amazonaws.com/new-acep-static1/reports/PRMA_MANUAL_cmyk.pdf. The illustration is based on sections 11, 12, 16 of the PRMA.

future and smoothing the ABFA in a particular year. There are also exceptional allocations including for tax refunds and the payment of management fees.

Between 2011 and 2019, the Annual Budget Funding Amount (ABFA) was the largest recipient of allocations, receiving about US$2.2 billion (representing about 38.6% of total receipts). GNPC received about 30% representing (US$1.8 billion); the Ghana Stabilization Fund received US$1.27 billion (representing about 21%); and the Ghana Heritage Fund received US$535.5 million (representing about 9%) of total receipts (see Figure 2).

The annual breakdown of disbursement of petroleum receipts is presented in Table 2 below:

Figure 4: Percentage Distribution of Petroleum Receipts from 2011 to 2019.



Explain bemnchmarck revenue

$2.2bn
ABFA largest recepient of allocations

$1.27 bn
GSF forth recepient of allocations

$1.8bn
GNPC third recepient of allocations

$535.5mn
Fifth recepient of allocations

Table 3: Distribution of Petroleum Receipts in US$ million (2011- 2019).

Years	Total Annual Receipts (US$ million)	GNPC (US$ million)	ABFA (US$ million)	GSF (US$ million)	GHF (US$ million)
2011	444.13	207.96	166.96	54.81	14.4
2012	541.62	230.95	286.55	16.88	7.34
2013	846.77	222.32	273.2	245.73	105.31
2014	978.02	180.71	409.07	271.76	116.47
2015	396.17	126.86	239.3	15.17	6.5
2016	247.18	88.5	98.38	29.51	12.65
2017	540.41	182.04	169.46	142.68	61.15
2018	977.13	305.27	235.10	305.72	131.02
2019	937.58	260.56	395.47	188.30	80.70
Total	**5,909.01**	**1,805.17**	**2,273.49**	**1,270.56**	**535.54**

Data Source: Ministry of Finance; PIAC.

2.4 Transfers to Ghana National Petroleum Corporation (GNPC)

By law, GNPC is entitled to allocation for financing their share of equity financing costs. They are further allowed up to 55 percent of the balance of the Net Carried and Participation Interest (CAPI) for their operations

Parliament is required to review the cash or barrels of oil equivalent of petroleum ceded to GNPC every three years. In 2011, Parliament approved a 40 percent share of the Net Carried and Participating Interest for GNPC, in line with the PRMA. This distribution arrangement ended after three years. Parliament approved a new proposal to reduce the GNPC's share of the Net CAPI to 30 percent, with effect from 2014. This was maintained through the 2020 budget cycle.

However, the impact of COVID-19 and budgetary constraints on government forced the reduction of GNPC's share of Net CAPI to 15 percent.

GNPC's share of petroleum revenues over the period 2011-2019 totalled US$1.8bilion of which about US$953.5 million was for equity financing in the Jubilee, TEN and Sankofa projects and US$848.9 million was the Corporation's share of Net CAPI which is spent on administration and operational activities beyond equity financing.

Figure 5: GNPC's Total Share of Petroleum Revenues From 2011 to 2019.

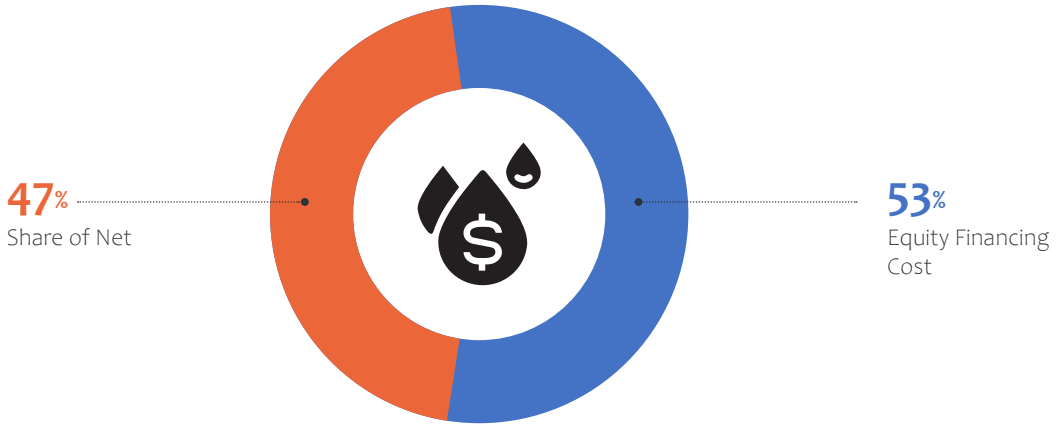


Table 4: Total Annual Petroleum Receipts from Revenue Sources in US$ millions (2011-2019).

Years	GNPC's Total Receipt (US$ million)	Equity Financing Cost (US$ million)	Share of Net CAPI (US$ million)
2011	207.96	132.48	-
2012	230.95	124.63	0.57
2013	222.32	68.32	0.68
2014	180.71	44.16	1.78
2015	126.86	65.91	0.47
2016	88.5	58.11	0.47
2017	182.04	103.44	1.57
2018	305.27	201.1	0.939
2019	260.56	155.37	1.11
Total	**1805.17**	**953.52**	**7.60**

Data Source: Annual Petroleum Reports; PIAC Reports.

2.5 Annual Budget Funding Amount (ABFA)

The Annual Budget Funding Amount is the proportion of petroleum revenues allocated to the annual budget of government to support development financing. Section 21(4) of the PRMA requires that not less than 70 percent of the ABFA is utilised on public investment expenditures.

The ABFA also allocates funds to the Public Interest and Accountability Committee and the Ghana Infrastructure Investment Fund. By the end of 2019, the ABFA had received about US$2.27 billion. The PRMA prescribes that the expenditure of the ABFA should be guided by a medium-term expenditure framework aligned with a long-term national development plan.

In the absence of a national development plan, the Finance Minister is required to prioritize up to four of the following sectors every three years for ABFA expenditures:

Agriculture and industry

Potable water delivery and sanitation

Housing delivery

Physical infrastructure and service delivery in health

Environmental protection, sustainable utilization and the protection of natural resources

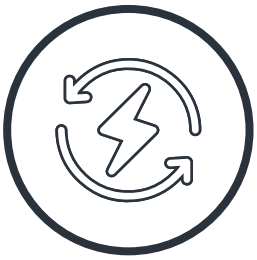
The strengthening of institutions of government concerned with governance and the maintenance of law and order

Infrastructure development in telecommunication, road, rail and port

Provision of social welfare and the protecton of the physically handicapped and disadvantaged citizens

Public safety and security

Rural development



Developing alternative energy sources

Physical infrastructure and service delivery in education, science and technology

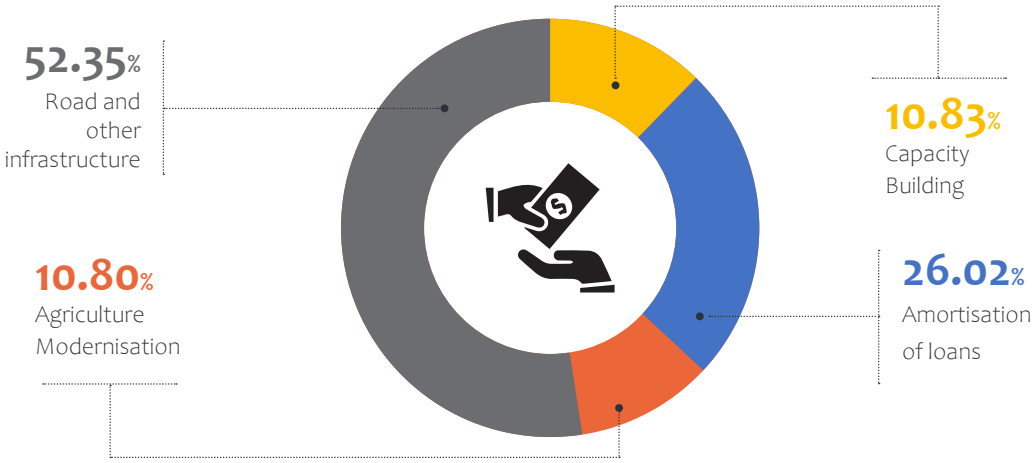
Between 2011 and 2016, government selected four priority spending areas as prescribed by the PRMA. In the first three years of oil revenue receipts, i.e., 2011-2013, namely, Expenditure and Amortization of Loans for Oil and Gas Infrastructure, Agriculture Modernization, Roads and Other Infrastructure, and Capacity Building were prioritized for ABFA expenditure.

These were maintained for the years 2014-2016. The total cedi equivalent of ABFA to the priority areas over the six years was about GH¢3.3 billion, of which Road and Other Infrastructure received the highest share GHS1.73 billion which forms 52.35 percent of total ABFA expenditure. This was followed by expenditure on Amortisation of Loans for Oil and Gas Infrastructure, amounting to about GHS860 million (26 percent).

Priority areas of capacity building and agriculture modernization received the least share of GHS357 million (10.83 percent) and GHS357 million (10.80 percent), respectively.

There were no allocations for Expenditure on Amortization of Loans for Oil and Gas Infrastructure in 2016 and for Capacity Building in 2014.

Figure 6: ABFA disbursements to priority areas between 2011 and 2016.

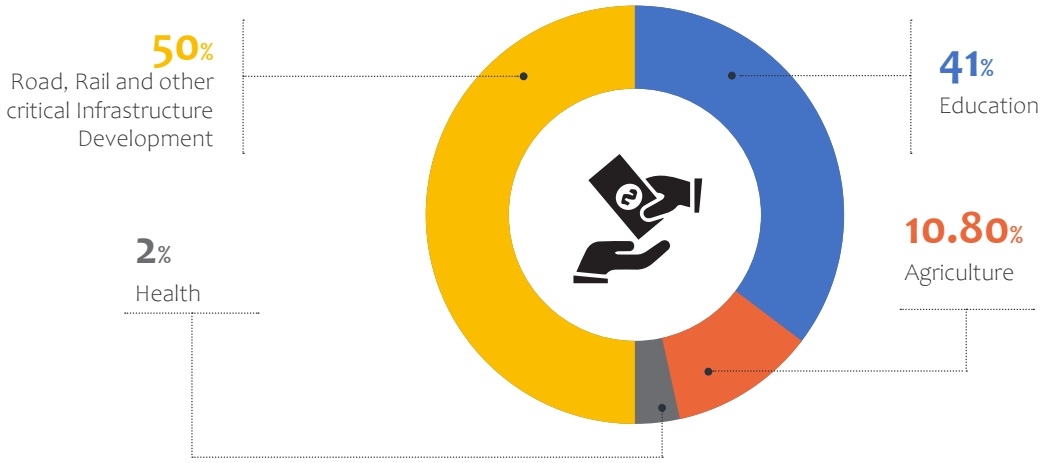


In 2017, the priority areas were changed to Road, Rail, & Other Critical Infrastructure Development; Agriculture; Physical Infrastructure & Service Delivery in Education; and Physical Infrastructure & Service Delivery in Health. A total of about GHS3.6 billion was distributed to the priority areas from 2017 to 2019. Out of this amount, Road, Rail and other Critical Infrastructure Development received the highest share of GHS1.79 billion (49.48 percent). Physical infrastructure and service delivery in education received the second highest share amounting to about GHS1.49 billion (41.07 percent). This was mainly used to finance governemnt's flagship programme on Free Senior High School.

Physical Infrastructure and Service Delivery in Health and Agiculture received the least share of ABFA disbursements of GHS263 million and GHS78 million, respectively. Cumulatively, the two sectors received about 9.5 percent of total ABFA disbursements.

Between 2011 and 2016, government selected four priority spending areas as prescribed by the PRMA. In the first three years of oil revenue receipts, i.e., 2011-2013, namely, Expenditure and Amortization of Loans for Oil and Gas Infrastructure, Agriculture Modernization, Roads and Other Infrastructure, and Capacity Building were prioritized for ABFA expenditure. In 2017, the priority areas were changed to Road, Rail, & Other Critical Infrastructure Development; Agriculture; Physical Infrastructure & Service Delivery in Education; and Physical Infrastructure & Service Delivery in Health.

Figure 7: ABFA disbursements to priority areas between 2017 and 2019.



2.6 ABFA Expenditure Beyond the Priority Areas

In 2014, the government, through the Ghana Infrastructure Investment Fund Act 2014 (Act 877), established the Ghana Infrastructure Investment Fund (GIIF), with the ABFA as one of the main sources of funds for the GIIF. According to Section 5(1b) of the Act, a maximum of 25 per cent of each year's ABFA is required to be transferred to the GIIF.

Consequently, the PRMA was amended in 2015 to, among other things, allow for the transfer of at most 25 percent of the ABFA into the GIIF. From 2015 to 2017, a total of about GH¢286 million has been transferred to the Fund.
There were, however, no transfers in 2018 and 2019.

Another important amendment to the PRMA was Section 57, which primarily provides that, funding for the Public Interest and Accountability Committee (PIAC) should be drawn directly from the ABFA.

PIAC is the public oversight body created by the PRMA to monitor and report on petroleum revenue expenditure in pursuit of transparency and accountability in the utilization of the revenues.

From 2016 to 2019, a total of about GHS8.8 million has been allocated to PIAC to fund its oversight duties on the utilization of petroleum revenues.

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Table 5: ABFA Expenditure Beyond the Priority Areas.

Expenditure / Area	2015	2016	2017	2018	2019	Total
	Amount (GHC)	Amount (GHC)	Amount (GHC)	Amount (GHC)	Amount (GHC)	Amount (GHC)
Public Interest and Accountability Committee (PIAC)	-	967,000.00	1,345,078.00	3,529,951.00	2,978,028.00	8,820,057.00
Ghana Infrastructure Investment Fund (GIIF)	189,027,435.50	68,050,000	29,220,365.22	-	-	286,297,800.72
Total	189,027,435.50	69,017,000.00	30,565,443.22	3,529,951.00	2,978,028.00	295,117,857.72

Data Source: : Ministry of Finance; PIAC.

2.7 The Ghana Petroleum Funds

The Ghana Petroleum Funds (GPFs) consist of the Ghana Stabilization Fund (GSF) and the Ghana Heritage Fund (GHF). The GSF is intended to provide a smoothening mechanism for the ABFA.

This accounts for the volatility associated with oil revenues. The GHF, on the other hand, is an endowment fund to be used only when the oil and gas resources are depleted. Essentially, the GHF is an instrument used to achieve intergenerational equity for utilizing the petroleum wealth of the country.

The Ghana Petroleum Funds have, since 2011, received US$1.8 billion out of which the Ghana Heritage Fund received about US$535.5 million, while the Ghana Stabilization Fund received US$1.27 billion. Table 5 presents the annual receipts of the GPF from 2011 to 2019.

The Ghana Petroleum Funds have, since 2011, received US$1.8 billion out of which the Ghana Heritage Fund received about US$535.5 million, while the Ghana Stabilization Fund received US$1.27 billion.

Table 6: Total Distribution of Petroleum Revenues to the GSF and GHF (US$ million).

Years	Total Annual Receipts (US$ million)	GSF	GHF
2011	444.13	54.81	14.4
2012	541.62	16.88	7.34
2013	846.77	245.73	105.31
2014	978.02	271.76	116.47
2015	396.17	15.17	6.5
2016	247.18	29.51	12.65
2017	540.41	142.68	61.15
2018	977.13	305.72	131.02
2019	937.58	188.30	80.70
Total	**5,909.01**	**1,270.56**	**535.54**

Data Sources: Ministry of Finance; PIAC

2.7.1 Investments of the Ghana Petroleum Funds

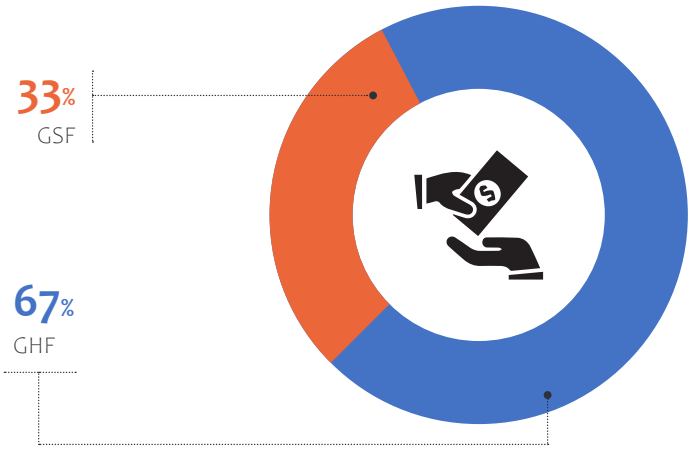
The Bank of Ghana is responsible for the operational management of the Ghana Petroleum Funds under the terms of the Operation Management Agreement (OMA) with the Minister for Finance. Section 25 (a) and (c) of the PRMA mandates the Minister for Finance to develop a policy for the investment of the GPF and make decisions in relation to the investment strategy and management of the GPF.

Both the GSF and GHF are invested in dollar-denominated debt instruments that generate returns as required by the PRMA. Currently, the GPFs are invested in the following instruments: overnight and call deposits, discount notes, treasury bills, short-term deposits, investment grade bonds, certificates of deposits, commercial papers and medium-term notes.

According to the 2019 Reconciliation Report on Petroleum Holding Funds by the Ministry of Finance, the GHF's total year-to-date returns as at December 2019 was 6.4 percent, while the 3-year annualized return was 3.46 percent.

For the GSF, total year-to-date returns was 2.41 percent with a 3-year annualized rate of return of 1.7 percent. Between November 2011 and December 2019, total returns of the GPF amounted to about US$65.9 million.
The GHF contributed 67 percent of this amount with total returns of US$44.2 million, while GSF returned a total of US$21.75 million, representing 33 percent of the total returns.

Figure 8: Total Returns of the Ghana Petroleum Funds Nov 2011 (Inception) to Dec 2019 (US$ million).



Data Source: Ministry of Finance (2019)

Table 7: Distribution of Petroleum Receipts in US$ million (2011- 2019).

Fund Name	Allocations Since Inception (Injection)	Realised Income Nov 2011 (Inception) to Dec 2019	Total Allocation and Net Income Since Inception	Withdrawals	Closing Value of GPFs
	31-Dec-19 (US$)	31-Dec-19 (US$)	31-Dec-19 (US$)	31-Dec-19 (US$)	31-Dec-19 (US$)
Ghana Heritage Fund	535,446,423.05	44,165,908.88	579,612,331.93	-	579,612,331.93
Ghana Stabilization Fund	1,270,580,336.05	21,750,365.47	1,292,330,701.52	(903,738,756.70)	388,591,944.82
Total	1,806,026,759.10	65,916,274.35	1,871,943,033.45	(903,738,756.70)	968,204,276.75

Data Source: Bank of Ghana (August 2019). Petroleum Holding Fund (PHF) & GPFs Semi-Annual Report.

2.7.2 Expenditure from the Ghana Stabilization Fund (GSF)

Withdrawal from the GSF is only allowed when petroleum revenue collected in any quarter falls below one quarter of the Annual Budget Funding Amount for that financial year. The PRMA allows the Minister for Finance to set a cap on the GSF and transfer the excess over the cap into the Contingency Fund for contingency expenditure and the Sinking Fund for debt servicing.

Between 2011 to 2019, a total of US$ 903.7 million was withdrawn from the GSF to support the ABFA and for debt-servicing.

Out of this amount, US$808.86 million which forms about 90 percent of the withdrawals, was used for debt servicing. Consistently, the Ministry of Finance has set a lower cap over the GSF to increase the available funds for debt servicing.

Table 8: Withdrawals from the Ghana Stabilization Fund (Since Inception).

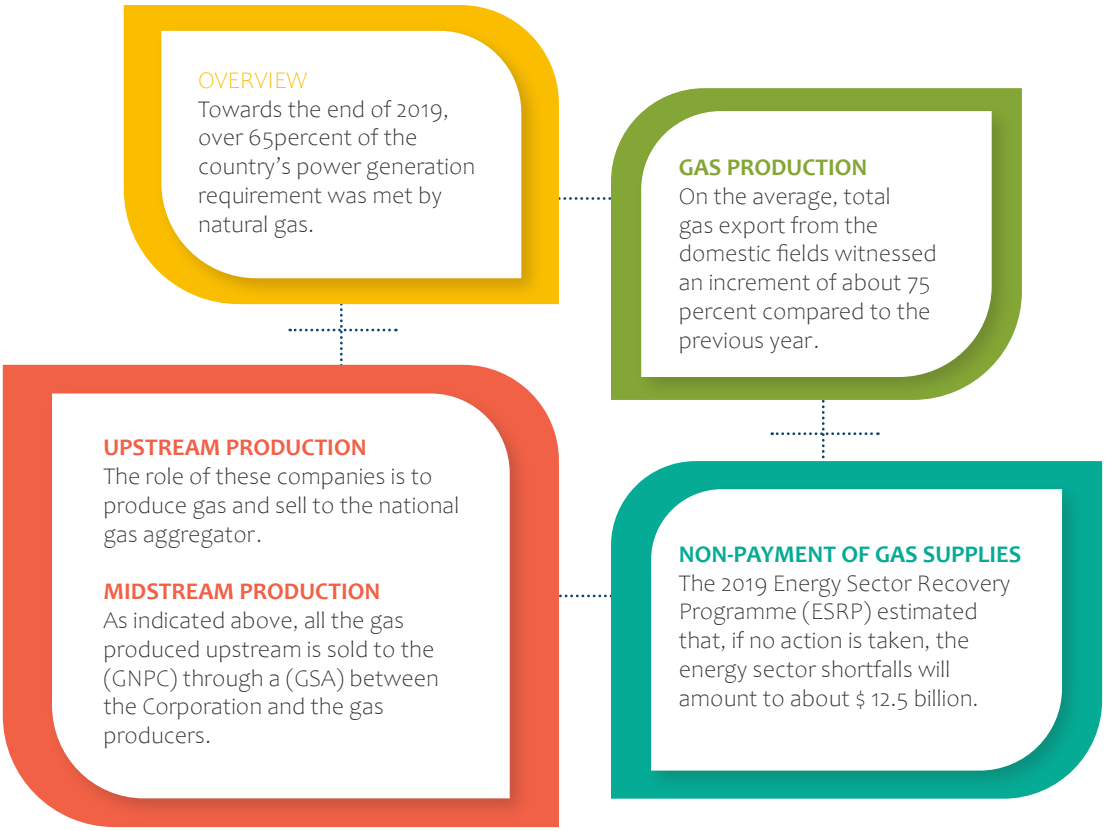
Year	Excess from Cap on GSF (US$ million)	Transfer to Contingency Fund (US$ million)	Transfer to Sinking Fund (US$ million)	Transfer to ABFA (US$ million)
2014	305.68	17.43	288.25	-
2015	124.96	23.76	47.51	53.69
2018	283.97	-	283.97	-
2019	189.13	-	189.13	-
Total	**903.74**	**41.19**	**808.86**	**53.69**

Data Source:: Annual Petroleum Reports (2011-2019); Annual Petroleum Reconciliation Reports (2012-2019

Between 2011 to 2019, a total of US$ 903.7 million was withdrawn from the GSF to support the ABFA and for debt-servicing. Out of this amount, US$808.86 million which forms about 90 percent of the withdrawals, was used for debt servicing. Consistently, the Ministry of Finance has set a lower cap over the GSF to increase the available funds for debt servicing.

3.0

Gas Sector Report



3.1 Gas Sector Overview in Ghana

The commercial use of natural gas in Ghana began with importation through the West African Gas Pipeline (WAGP) in 2011. In line with the Ministry of Energy's policy to establish natural gas as the primary fuel for power generation in the long term, natural gas is gradually becoming the backbone of the country's power sector.

Towards the end of 2019, over 65 percent of the country's power-generation requirement was met by natural gas. As a result of its importance to the power sector, any disruptions to the gas value chain pose dire consequences for the power sector.
In fact, the power crisis experienced between 2013 and 2015 was largely attributed to the non-availability of gas from Nigeria. Although, some capacity still exists for the consumption of Liquid fuels, i.e., LCO and HFO, their utilization is only triggered during emergencies or planned outages of any of the supply sources.

The drive to develop Ghana's own gas infrastructure follows the imposition of zero flaring policies on domestic oil fields and the realization of the benefits associated with the use of natural gas, such as, lower cost and low carbon emissions as compared to liquid fuels.

Developing the country's own gas infrastructure also serves as an incentive for the exploitation of domestic oil and gas resources. Currently, domestic gas is received from the Jubilee, TEN and Sankofa offshore fields.

3.2 The Gas Sector Value Chain and Roles of Institutions:

Upstream production

Gas producers are international oil companies that operate the various fields in Ghana. The Jubilee and TEN fields are operated by Tullow Oil PLC, while the OCTP Field is operated by ENI Limited. The role of these companies is to produce gas and sell to the national gas aggregator. None of the gas produced in Ghana is exported outside the country. Tullow sells raw gas produced offshore to the Ghana National Petroleum Corporation (GNPC). ENI, on the other hand, sells lean gas processed offshore from the OCTP field to GNPC.

Midstream off-take

As indicated above, all the gas produced upstream is sold to the Ghana National Petroleum Corporation (GNPC) through a Gas Sales Agreement (GSA) between the Corporation and the gas producers. This is in line with the nationally-identified role of GNPC as the gas aggregator. This makes GNPC the owner of the domestic gas produced.

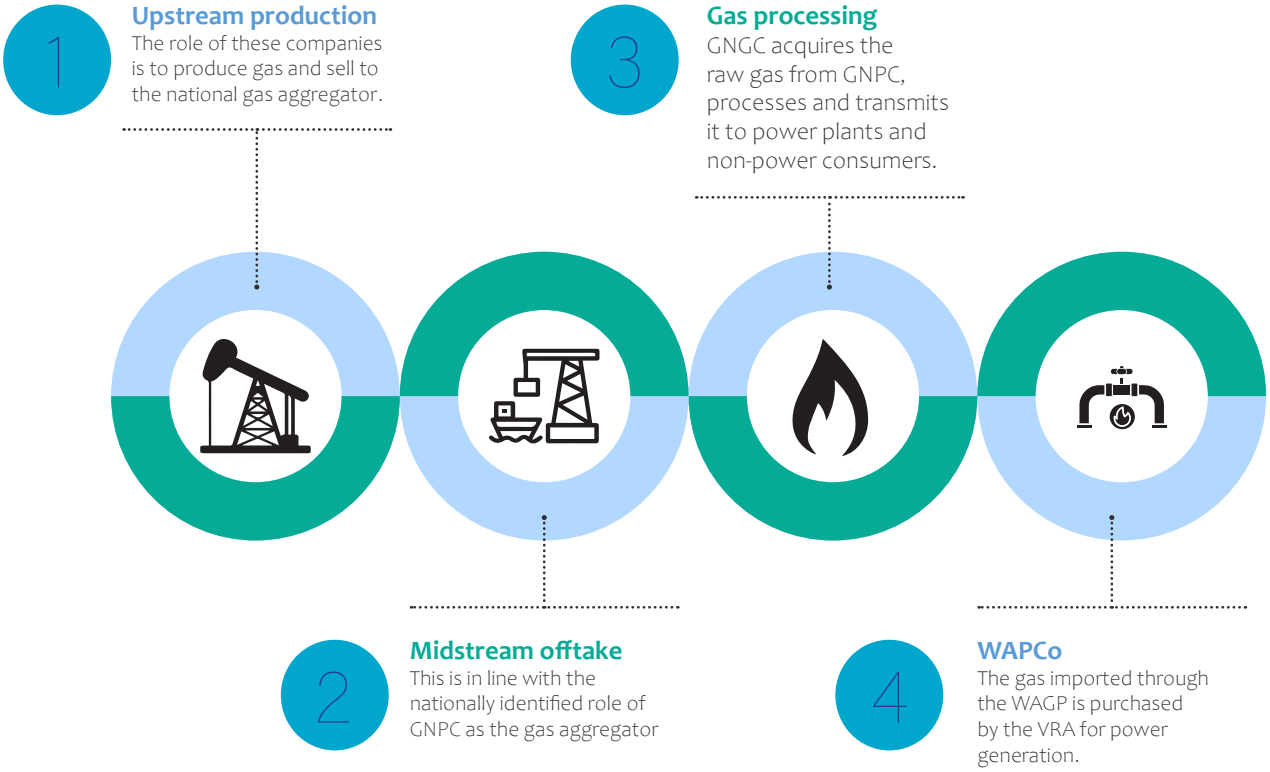
Gas processing

The Ghana National Gas Company (GNGC) is responsible for gas processing and transmission. The company owns and manages the Gas Processing Plant (GPP) which processes gas from the Jubilee and TEN fields. GNGC acquires the raw gas from GNPC, processes and transmits it to power plants and non-power consumers. GNGC sells other by-products from gas processing such as condensates and Liquefied Petroleum Gas (LPG) to the domestic market.

3.3 The West African Gas Pipeline Company (WAPCo)

WAPCo is the owner of the West African Gas Pipeline (WAGP). The WAGP Project is a multi-state project aimed at transporting gas from Nigeria for deliveries to Benin, Togo and Ghana.

The main section of the pipeline is offshore, running about 569km from the Lagos Beach Compressor Station (LCBS) in Nigeria to the Aboadze power enclave near Takoradi, with delivery points in Cotonou (Benin), Lomé (Togo) and Tema. The gas imported through the WAGP is purchased by the VRA for power generation.



3.4 Gas Infrastructure and improvements.

a

Takoradi-Tema Interconnection Project (TTIP)

The TTIP also known as the Reverse Flow Interconnection Project, received Cabinet approval in 2015. It involves the interconnection and modification of Ghana's western gas infrastructure to the WAGP to enable the flow of stranded gas in the west (Takoradi) to the east (Tema). The TTIP was conducted in two phases; the first phase (Takoradi Scope) included the expansion and interconnection of the GNGC's Regulating and Metering Station (RMS), currently known as the Takoradi Distribution Station (TDS) to the WAGP.

The Takoradi scope was completed in April 2019, allowing for a total of about 10 bcf[10] of excess gas to be transported to the eastern enclave in 2019. The GNGC's RMS was expanded from an initial capacity of 130 to 405 mmscfd, whereas WAPCo's RMS was expanded from a receiving capacity of 120 to 225 mmscfd and output capacity of 128 mmscfd. The second phase (Tema Scope) was completed in July 2020 and it entailed the expansion of WAPCo's Tema Regulating and Metering Station from an initial capacity of 140 to 235 mmscfd. WAPCo's Tema RMS now receives gas from both and Nigeria and Takoradi.

b

Infrastructure to Allow Relocation of Karpowership Power Plant

The construction of pipelines from GNGC's Takoradi Distribution Station to the Sekondi Naval Base, and breakwater structures were completed towards the end of 2019 to enable the relocation of the Karpowership plant from Tema to Sekondi. The relocation and subsequent conversion to gas turbines allows the plant, which hitherto was using Residual Fuel Oil (RFO), to consume up to 90 mmscfd of gas.

c

Sanzule Onshore Receiving Facility (SORF)

The ORF receives gas produced at the OCTP Field. At the ORF, the gas is conditioned and transported to co-mingle with gas from the Atuabo Gas Processing Plant (AGPP). The co-mingled gas is transported to the TDS for metering and pressure adjustment before it is distributed to customers. The ORF is connected to the 110 km GNGC pipeline from Atuabo to Aboadze by a 2.5km pipeline

d

The Atuabo Gas Processing Plant (AGPP)

The Atuabo Gas Processing Plant was completed in 2014 as part of the Western Corridor Gas Infrastructure Development Project (WCGIDP) with a design capacity of 150 mmscfd and a nominal capacity of 120 mmscfd. The plant receives raw gas from the Jubilee and TEN fields through a 58km offshore pipeline. The gas is processed and transported to power customers mostly in the Aboadze power enclave and non-power users in its environs.

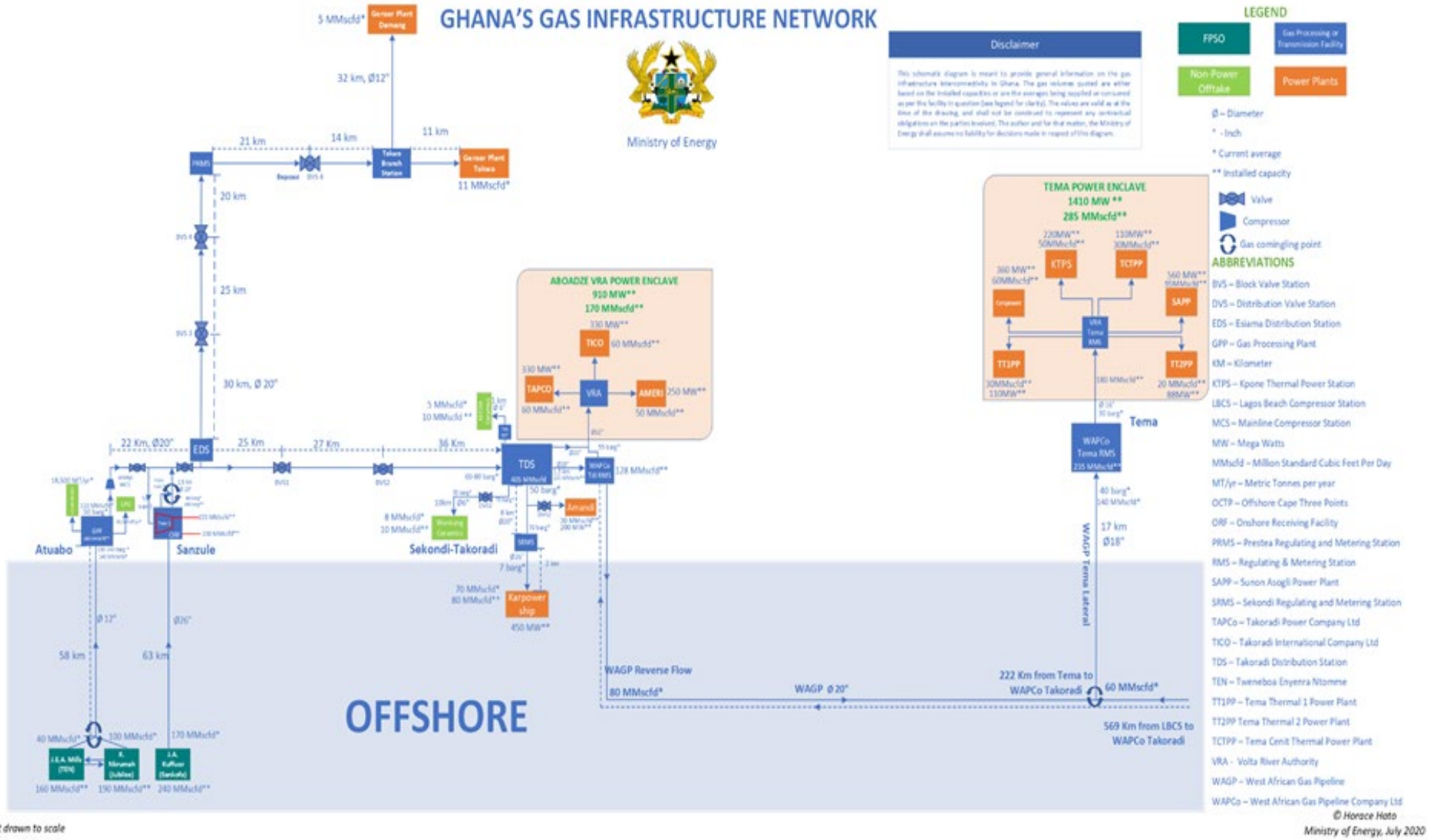
e

Tema LNG Regasification facility

Construction of the regasification facility in Tema (Tema LNG project) progressed in 2019. The Tema LNG project is nearing completion and the company hopes that infrastructure installation will be completed quarter one of 2021. As at the end of 2019, marine works were, at least, 66 percent complete, basin dredging and accropode fabrication works were, at least, 46 percent and 52 percent complete, respectively. Gas supplies to the facility will be on incremental bases, eventually adding up to 200 mmscfd in the near future.

10 Reference to WAGPA 2019 report.

Figure 9: Ghana's Gas Infrastructural Network.



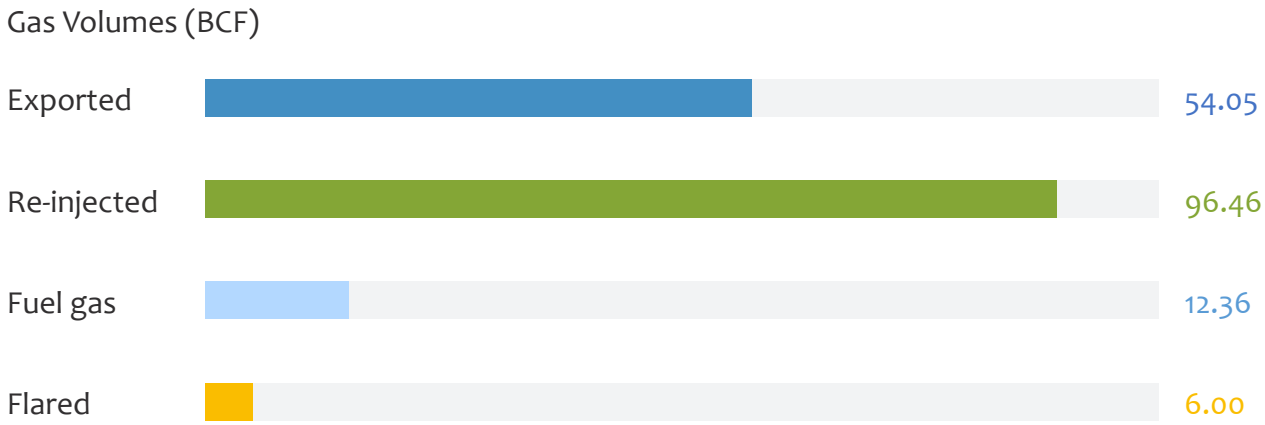
3.5 Domestic gas production and exports

On the average, total gas exports from the domestic fields witnessed an increment of about 75 percent compared to the previous year.

This can largely be attributed to the interconnection of the western Natural Gas Transmission Infrastructure Network (NGTIN) to the WAGP under the TTIP (Takoradi Scope). This enabled stranded gas to be transported to the East. The relocation of Karpower plant to the West and its subsequent conversion to use natural gas also contributed to the increase in gas demand. Sankofa gas exports for example, saw an increment of over 400 percent relative to the previous year.

According to reports from PIAC and the Petroleum Commission, total gas production from the three domestic gas fields in 2019 was about 169.5 bcf, out of which 54 bcf, was exported for power generation and non-power uses. Also, 96.4 bcf was reinjected, 12.3 bcf was used as fuel on the FPSO and 5.9 bcf was flared.

Figure 10: Gas production from domestic sources.



Data Source: Data Source: Petroleum Commission (2019)

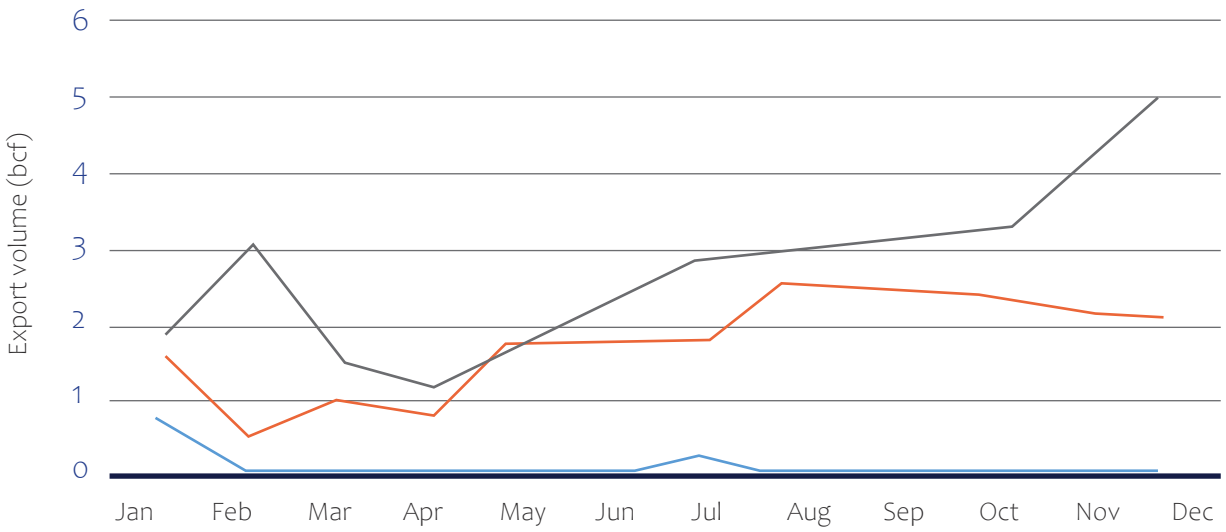
Exports from Sankofa Fields formed about 61 percent, whereas exports from Jubilee and TEN Fields formed 38 percent and 1 percent, respectively, total gas production.

Exports from Sankofa fields for the year increased from about 1.9bcf to 5 bcf between January to December 2019. Gas exports from the Jubilee fields increased from 1.5 bcf in January to 2.1 bcf in December 2019. Exports from the Jubilee Fields exhibited a marginal reduction towards the end of the year, particularly due to intermittent challenges experienced by the Jubilee partners.

Also, as a result of these challenges, total exports from the TEN fields amounted to only 693 mmscf for 2019.

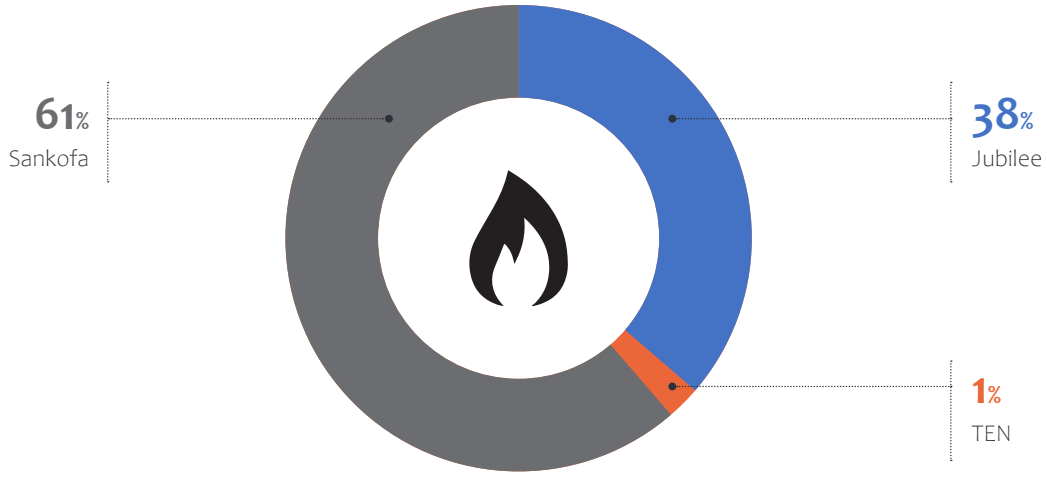
According to reports from PIAC and the Petroleum Commission, total gas production from the three domestic gas fields in 2019 was about 169.5 bcf, out of which 54 bcf, was exported for power generation and non-power uses. Also, 96.4 bcf was reinjected, 12.3 bcf was used as fuel on the FPSO and 5.9 bcf was flared.

Figure 11: 2019 Gas Export from the Domestic Fields.



Data Source: Petroleum Commission (2019)

Figure 12: Total Gas Exported from Domestic Fields in 2019.

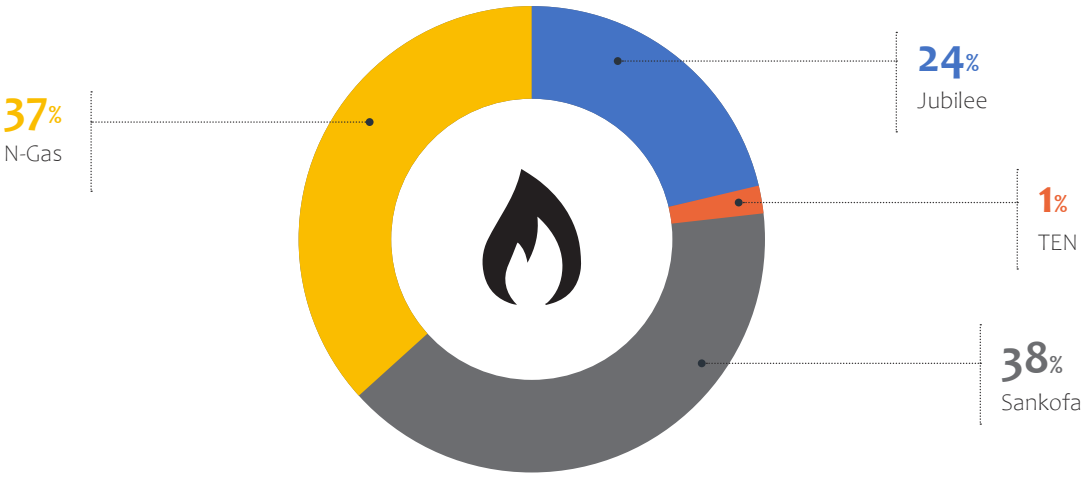


Data Source: Petroleum Commission (2019)

In addition to the domestic gas sources, Ghana obtains gas from Nigeria through the West African Gas Pipeline.

The total gas received from Nigeria in 2019 was approximately 31 bcf, representing 37 percent of total gas supplied from various sources. Gas from the Sankofa field accounted for 38 percent of total volume of gas supplied (domestic and imported). Imports from Nigeria constituted 37 percent, while supply from Jubilee and TEN fields amounted to 24 percent and 1 percent, respectively, of total gas supplied.

Figure 13: Gas available from all sources in 2019.



Data Source: Petroleum Commission Report (2019) and WAGPA Report (2019)

3.6 Gas price and fiscal implications for Ghana

The current Average Weighted Cost of Gas (WACOG) applied to gas supplied for power generation is US$6.08/MMBtu, which is a reduction of 1.21 from the previous WACOG.

The new gas price assumes a Sankofa headline price of US$6.14/MMBtu, after the policy to waive government royalty and GNPC equity interest. However, since the necessary agreements are yet to be ratified for this cost to be realized, the actual Sankofa billings are still higher than this assumed cost of US$6.14/MMBtu, leading to a financial shortfall in the gas sector.

Government has also introduced a special initiative for non-power gas consumers called the Discounted Industrial Development Tariff (DIDT), set at US$4.2/MMBtu. While the idea to create incentives for non- power gas consumption is not out of place, it adds to the current shortfall being witnessed in gas sector revenues.

The total gas received from Nigeria in 2019 was approximately 31 bcf, representing 37 percent of total gas supplied from various sources. Gas from the Sankofa field accounted for 38 percent of total volume of gas supplied (domestic and imported). Imports from Nigeria constituted 37 percent, while supply from Jubilee and TEN fields amounted to 24 percent and 1 percent, respectively, of total gas supplied.

3.7 Gas Sector Challengers

1

Overlaps in institutional roles in the gas sector

Contrary to the recommendations of the country's Gas Master Plan, the gas sector is made up of state entities performing functions which could have been simplified and handled by fewer institutions. This gas sector report is of the view of that simplification of institutional roles in the sector, will boost investor confidence, minimize the cost of delivered gas and provide a sound basis for the development of the gas sector in Ghana. Fewer regulatory institutions would also mean lesser regulatory charges on gas sector activities leading to a reduction in gas tariff.

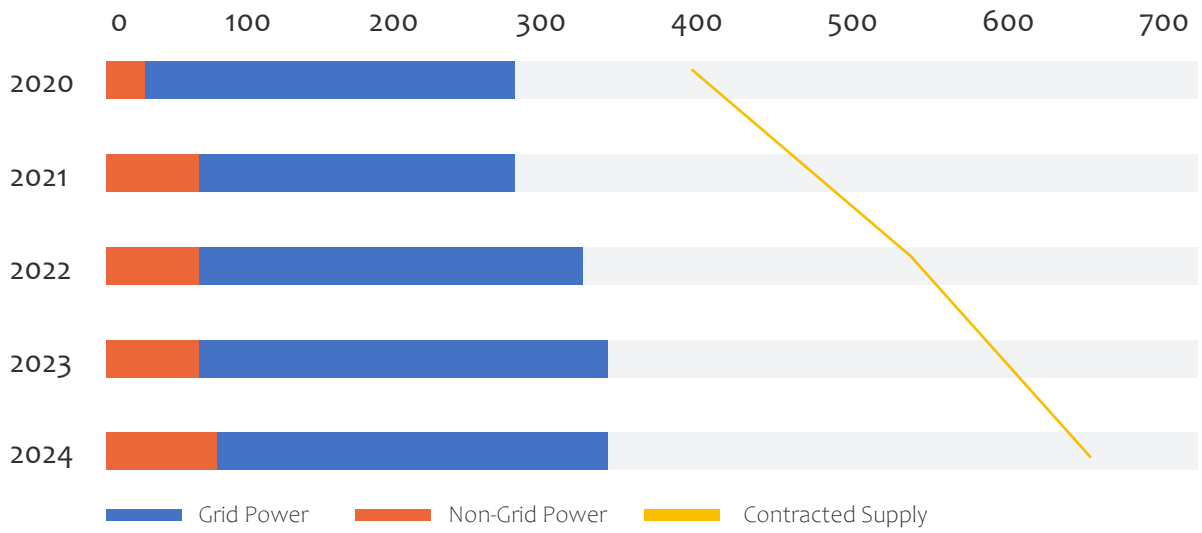
Furthermore, the lack of clarity on the gas aggregator role makes the implementation of the WACOG meaningless since sector companies such as the VRA and GNPC acquire gas from various sources at different prices. These differing prices are, in some cases, higher than the WACOG but the power companies are compelled to pay based on the PURC WACOG. It would have been simpler for a single aggregator to offset the liability on expensive gas sources with gains from cheaper sources such as the associated gas fields.

2

Excess gas supply

Based on current infrastructure, Ghana has a minimum domestic gas supply capacity of about 340mmscfd against a current gas demand of about 320 mmscfd. The excess capacity is further complicated by the imports from Nigeria which, like the Sankofa (OCTP) contract is governed by Take or Pay clauses, but not being enforced due to a force majeure declared by N-Gas (VRA's gas supplier) since 2013. It is against this background that, we are of the view that further commitment to gas supplies from external sources will only worsen the current financial woes of the sector, especially when the force majeure on the WAGP is finally lifted. Government's projection of gas demand for grid and off-grid uses in the medium term (from 2020 to 2024) does not correspond with the contracted supply of gas within the period under review. 2024) does not correspond with the contracted supply of gas within the period under review.

Figure 14: Medium-Term Gas Demand Projection (Normal Growth) Vs Contracted Supply.



Data Source: Ministry of Energy

Maximizing the utilization of domestic gas will ensure that the liabilities under the "Take or Pay" contracts are lessened which, for Sankofa gas alone, amounts to over US$500 million per annum. Even though there is the potential for the unutilized gas (known as make up gas) to be utilized within 5 years, it is unclear if current contractual commitments to other supply sources will enable GNPC take advantage of the make-up gas opportunity, since the make-up gas can only be off-taken after the exhaustion of the contractual volumes.

In view of the above, it is recommended that the LNG infrastructure, which is nearing completion, be decoupled from the gas supply agreement to create room for the consumption of more domestic gas. Consumption of more domestic gas, in addition to minimizing the burden of Take or Pay liabilities, will boost oil production from the associated gas fields, thus, maximizing oil revenues for the country.

It is also recommended that government explores the opportunity of gas exports to other West African neighbours, such as Cote d' Ivoire, Togo and Benin.

3.7.1 Non-payment of gas supplies

Beyond the problem of excess gas supply is the non-payment for gas supplies to the power sector. The power sector, which consumes about 96 percent of the total gas demand in the country, does not pay for gas consumed.

This, in turn, makes it difficult for GNPC,as the gas aggregator, to pay for gas produced, particularly gas from the OCTP fields. As a result, government is called upon to pay because it is the ultimate guarantor. The Cash Waterfall Mechanism (CWM), implementation of which began in April 2020, is a good step towards ensuring equitable revenue disbursement in the sector.

However, the allocations are woefully inadequate to balance the sector shortfalls. The 2019 Energy Sector Recovery Programme (ESRP) estimated that, if no action is taken, the energy sector shortfalls will amount to about US$12.5 billion by the end of 2023.

In this regard, we strongly recommend that government, as a matter of urgency, exploit avenues for maximizing ECG's collections to avert the liquidity challenges of the sector.

Maximizing the utilization of domestic gas will ensure that the liabilities under the "Take or Pay" contracts are lessened which, for Sankofa gas alone, amounts to over US$500 million per annum. It is recommended that the LNG infrastructure, which is nearing completion, be decoupled from the gas supply agreement to create room for the consumption of more domestic gas.

4.0

Legal Regime

REGULATORY REGIME
In spite of the early start to petroleum exploration activities in Ghana, until the 1980s, there was little petroleum-specific legislation outside of the 1979 Constitution. Petroleum regulation was subsumed under general minerals law such that the definition of minerals, included petroleum.

ENVIRONMENT
Every undertaking engaged in petroleum operations must register with the EPA and obtain an environmental permit before it commences operations.

THE PEPA
The PEPA provides that petroleum activities shall be conducted only in an open area under a licence or PA and in accordance with applicable enactments.

TRENDS
Following calls by contractors the Petroleum General Regulations has been recently amended to allow for the drilling of more wells within existing producing fields where the contractors identify prospects of outlying petroleum reserves.

4.1 Pre-Commercial Discovery – Legal Regime

4.1.1 Regulatory Regime

Attempts at establishing a petroleum industry in Ghana go as far back as the late 19th century, with the first wells being drilled in 1896, when exploration for oil and gas started onshore in the Tano basin.[11]

In spite of the early start to petroleum exploration activities in Ghana, until the 1980s, there was little petroleum-specific legislation outside of the 1979 Constitution. Petroleum regulation was subsumed under general minerals law such that the definition of minerals, included petroleum.[12]

The Constitution stipulates that:

"every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for, the people of Ghana".[13]

11 Petroleum Commission, 'Phase 1 (1896-1957)' (Ghana Petroleum Register, 2017) https://www.ghanapetroleumregister.com/phase-1 accessed 30 April 2020.
12 Concessions Act, section 49.

13 Constitution, article 257(6).

To ensure that resources are exploited and utilised in a manner that inures to the benefit of the country, any transaction, contract or undertaking involving the grant of a right or concession must be ratified by Parliament unless Parliament by resolution exempts it from this requirement. The grant of the right must be done by or on behalf of any person including the Government, to any other person or body of persons whatsoever described.[14]

The 1980s marked the beginning of the development of a comprehensive regulatory framework for petroleum. The petroleum legal regime was crafted to attract international oil companies with the technical know-how and financial reserves do undertake petroleum exploration and development operations. The responsibility for petroleum matters was given to the Minister of Energy. The Minister was responsible for entering into petroleum agreements (PAs),[15] and for general oversight of the industry, including the setting of policy and prescription of regulations for the effective implementation of PNDCL 84.[16]

Initially, the Petroleum Department, under the Ministry of Mines and Energy was responsible for petroleum activities and associated regulatory matters.[17] With the objective of ensuring that Ghana obtained the optimum benefits from petroleum resources, the GNPC was later established by PNDCL 64 to take over responsibilities of the Petroleum Department. PNDCL 64, thus, established the first institutional framework for upstream petroleum activities.[18] Subsequently, PNDCL 84 was enacted to govern the upstream petroleum sector. It established the contractual relationship between the Republic, the GNPC and prospective investors in the upstream operations through a PA.[19]

Under these enactments, the GNPC was made an automatic partner to all international oil companies that entered into PAs with the Republic. The GNPC also exercised regulatory powers over the industry and, in particular, was the advisor to the Minister on matters pertaining to the petroleum industry.[20] The GNPC's dual role as regulator and commercial actor in the petroleum industry created a conflict of interest situation and was contrary to international best practices. This conflict situation has since been resolved by the establishment of the Petroleum Commission as the regulator of the industry and is discussed briefly in the introduction to the next chapter of this Report.

4.1.2 Pre-discovery Fiscal Regime

At the turn of the 20th century, Ghana's focus was on attracting foreign investment to hasten efforts to develop the country's exploration and production of oil and gas.[21] It was, therefore, of great importance to create an attractive fiscal regime that promoted international participation in the nascent sector.

The upstream tax regime was set out in the Petroleum Income Tax Law 1987 (PITL), PNDC Law 188. Under the PITL, unless otherwise agreed in the relevant PA, a person conducting petroleum operations was subject to a chargeable tax of 50% of the chargeable income[22] arising from the operations in respect of a year or period.[23] Whilst the PITL also provided for withholding tax on payments to subcontractors and on gains or profits of expatriate employees, it did not provide for capital gains tax.

In addition to taxes, investors were also required to pay royalties,[24] annual rental charges,[25] participating interest[26] and additional oil entitlements as prescribed by their PAs. Regarding the non-tax fiscal regime, many of the PAs negotiated under the PNDCL 84 contained what are considered, in retrospect, generous fiscal terms and incentives. For example, the State's portion in petroleum operations was a royalty, often below 10% of the crude oil to be produced. The GNPC, as the State's national oil company, also received a 10% participating interest in petroleum operations. This interest was carried for exploration and development operations. Accordingly, the GNPC was not required to pay for costs incurred in exploration and development activities but only for production operations.

14 id., article 268.
15 PNDCL 84, section 1(3).
16 Id., section 32(1).
17 Petroleum Commission, 'Phase 5 (1981-2001)' (Ghana Petroleum Register, 2017) https://www.ghanapetroleumregister.com/phase-5 accessed on 09 April 2020.
18 GNPC Act, sections 2 and 3.
19 PNDCL 84, sections 2(1) and 5(4).
20 GNPC Act, sections 2(2) and (3).
21 Petroleum Commission, 'Phase 5 (1981- 2001)' (Ghana Petroleum Register, 2017) https://www.ghanapetroleumregister.com/phase-5 accessed on 9 April 2020.
22 Chargeable income of a person for a year of assessment is calculated as the gross income of that person less any allowable deductions.
23 PITL, section 6.
24 id., sections 27 and 28.
26 id., section 18.

In addition to the 10% participating interest, GNPC had an option to acquire an additional participating interest upon the achievement of commercial discovery with respect to a block or contract area. This interest was pre-agreed and often did not exceed 5%. GNPC was required to exercise this option within a prescribed period following the declaration of commercial discovery by the contractor. Upon the exercise of this option, GNPC was only required to pay for development and production costs related to the additional interest but not exploration costs.

Flexible provisions on foreign exchange, subject to the foreign exchange laws in force at the time, also permitted investors to transfer the proceeds of their operations out of the country with perfunctory review. For example, international oil companies had retention provisions in their PAs which authorised them to retain the proceeds of their petroleum sold abroad to meet their foreign payment obligations without going through local banks.[27]

4.1.3 Pre-discovery local Content

The local content agenda was modest at best, as Ghana had neither the resources nor know-how to make any meaningful contributions to the industry.

PNDCL 64 merely entrusted the GNPC with the function of: (i) ensuring that the Republic obtained the greatest possible benefits from the development of its petroleum resources; (ii) obtaining the effective transfer to the Republic of appropriate technology relating to petroleum operations; and (iii) ensuring the training of citizens and the development of national capabilities in all aspects of petroleum operations[28] References to local content and local participation as a strategic national objective also appeared in PNDCL 84.

For instance, a contractor or subcontractor was obliged to ensure that, as far as possible, employment opportunities would be given to Ghanaians who had the requisite expertise or qualifications at the various levels of operations.[29]

A contractor or subcontractor was also required to prepare and implement plans and programmes for training Ghanaians in petroleum operations.[30]

4.1.4 Environmental

The Environmental Protection Agency Act, 1994 (Act 495) was passed some ten years after PNDCL 64 and PNDCL 84. The Act established the EPA and, among other things, made the environmental obligations of persons carrying out petroleum operations clearer.

The EPA is responsible for ensuring compliance with the environmental laws of Ghana. The EPA's mandate includes advising the Minister for Environment on environmental policies, issuing environmental permits and prescribing standards and guidelines relating to all forms of environmental pollution.[31]

Accordingly, every entity engaged in petroleum operations must register with the EPA and obtain an environmental permit before it commences operations.[32]

The EPA Act and the Environmental Assessment Regulations 1999 (LI 1652) set out the registration, permitting and assessment obligations applicable to all undertakings that may have an adverse impact on the environment, including petroleum operations.[33]

27 See articles 13.1 of the WCTP, DWT, OCTP and DWCTP PAs.
28 PNDCL 64, section 2.
39 PNDCL 84, section 23(10).
30 id, section 23(13).
31 EPA Act, section 2(a) and (f).
32 Ghana Environmental Assessment Regulations 1999, LI 1652, regulation 1.
33 ibid.

PNDCL 64 merely entrusted the GNPC with the function of: (i) ensuring that the Republic obtained the greatest possible benefits from the development of its petroleum resources; (ii) obtaining the effective transfer to the Republic of appropriate technology relating to petroleum operations; and (iii) ensuring the training of citizens and the development of national capabilities in all aspects of petroleum operations.

Any person interested in the exploration and production of petroleum in Ghana was required to firstly register with the EPA, then to submit an environmental impact assessment (EIA) to the EPA in advance of its application for an environmental permit before finally obtaining an environmental permit.

In order to monitor and strengthen the environmental management of the upstream petroleum sector, in 2011, the EPA issued Guidelines for Environmental Assessment and Management of Offshore Oil and Gas Development in Ghana. The guidelines were issued to promote the principles of sustainable development, transparency and international best practices, among others.[34]

The guidelines also provide systematic environmental impact assessment procedures, specific to the sector, as well as requirements for operators or oil and gas developers, to ensure that their activities are conducted in a safe and responsible manner. [35]

4.2 Legal Regime post-commercial discovery

After commercial production of oil began in Ghana in December 2010, a number of legislative and institutional initiatives were promulgated in the upstream sector in a bid to better regulate and manage the sector. The PC was established to regulate and monitor the utilisation of upstream petroleum resources and coordinate the policies in relation to them.[36]

In effect, the Petroleum Commission Act removed the GNPC's regulatory powers in relation to the upstream petroleum sector and gave those powers to the PC.[37] The GNPC maintained its commercial functions as Ghana's national oil company tasked with exploration, development, production and disposal of petroleum, either alone or in association with others.[38]

In the area of revenue management, the PRMA was also enacted in 2011 and, as amended by the Petroleum Revenue Management (Amendment) Act, 2015 (Act 893), provides a framework for the management of Ghana's petroleum revenue derived from the upstream sector. Hitherto, the management of such revenue was done under the Consolidated Fund.[39]

However, in a bid to avoid the oil curse, that has plagued several oil-producing nations, the PRMA established a special regime for the prudent collection, disbursement and utilisation of oil revenue. To help achieve these objects, the PHF and the Ghana Petroleum Funds were established.[40]

Other major changes in the industry, included the repeal and replacement of PITL and the PNDCL 84 by the Income Tax Act and the PEPA in 2015 and 2016, respectively. These major changes are further discussed in this chapter.

4.2.1 The Petroleum (Exploration and Production) Act, 2016 (Act 919) – An Overview

The Petroleum (Exploration and Production) Act, 2016 (Act 919) (PEPA) was enacted to replace PNDCL 84 as the principal legislation for the regulation of petroleum activities in the upstream sector. The Minister and the PC are the persons responsible for implementing the PEPA.

The PEPA contains several novel and specific provisions aimed at ensuring optimum and efficient regulation of petroleum activities for the general benefit of Ghanaians in light of Ghana's growing petroleum reserves.[41]

The PEPA provides that petroleum activities shall be conducted only in an open area under a licence or Petroleum Agreement and in accordance with applicable enactments.[42] The range of petroleum activities contemplated under the PEPA includes reconnaissance (the collection, processing and interpretation of petroleum data, under a licence),[43] exploration, development and production operations all under a PA.[44] Additionally, the PEPA, through licensing, regulates the installation and operation of facilities for the transportation, treatment and storage of petroleum.[45]

The PEPA generally requires that a PA be entered into after an open, transparent and competitive public tender process.[46]

34 Offshore Oil and Gas Development in Ghana, Guidelines for Environmental Assessment and Management (2011), Introduction.
35 ibid.
36 Petroleum Commission Act, section 2.
37 id, section 24(2)
38 GNPC Act, section 2(1) and (3)(b), (c) and (f).
39 1992 Constitution, article 176
40 PRMA, sections 2, 9 and 10.
41 PEPA, section 2.
42 id., section 5.
43 id., section 9.
44 id, section 10(1).
45 id, section 38.
46 id, section 10(3).

However, the Minister, in consultation with the PC, is given discretion to enter into a PA through direct negotiations where it is believed that direct negotiations would be the most efficient manner to exploit petroleum resources in a given area.[47] This discretion has been criticised as being too wide and may potentially be exercised arbitrarily to defeat the PEPA's intention of designating tendering as the primary means of awarding petroleum blocks. This concern has been somewhat justified by events that occurred in Ghana's maiden petroleum licensing round.

Though several world-class international oil companies, initially, expressed interest to participate in the competitive bids, some of these companies ultimately withdrew from the bids with the intention of applying for the other blocks that were on offer for direct negotiations. This move largely undermined the competitiveness of the bids and could lead to reduced benefits to the State from petroleum agreements resulting from direct negotiations. It has, therefore, been suggested that the direct negotiations approach should only be used in exceptional circumstances where the peculiarities of a block necessitate that a specific company with particular, specialized and proprietary technology and knowhow be approached for an optimised development of the available petroleum resource.[48]

The PEPA mandates the GNPC to hold an initial participating interest of, at least, 15% for exploration and development with the option to acquire an additional participating interest.[49] As is consistent with the provisions of the existing PAs, the GNPC's initial interest is carried with respect to exploration and development operations.[50] The PEPA further grants the GNPC a right to acquire an unspecified additional interest following declaration of commercial discovery.[51]

This additional interest is only paying in respect of development and production operations, also consistent with the practice under existing PAs.[52] These provisions imply that the State directly or indirectly, through the GNPC, does not contribute to exploration cost. This also means that, unlike the contractor, the State does not incur expense where there is no commercial find after conducting exploration operations. PAs are valid for a period of twenty-five (25) years subject to extension in prescribed instances.[53]

This is less than the 30-year term provided under PNDCL 84.[54] In order to safeguard the interest of the Republic in petroleum agreements, the assignment of the interest of a contractor in a PA and the sub-contracting of petroleum contracts, must have the prior written approval of the PC and the Minister.[55]

Moreover, a contractor is obliged to apply for further permits from the PC before undertaking certain activities, such as exploration drilling and the production or injection of petroleum.[56] The PC is mandated to establish and maintain a register of PAs, licenses, permits and authorisations, all of which must be open to the public.[57]

The PEPA specifies that petroleum operations in Ghana must be carried out through a company incorporated under the Companies Act. This Ghanaian incorporated company must be the legal entity to whom a licence is granted or the signatory to the PA or the petroleum sub-contract.[58] The company must also open and maintain an account with a bank in Ghana.[59]

Any information or data obtained in connection with petroleum activities belongs to the Republic and a licensee, contractor or sub-contractor may use such information only for the duration of their licence or PA. [60]

47 id, section 10(9).
48 Civil Society Licensing Round Monitoring Group, 'Ghana's First Oil Licensing Round Monitoring Report' (2020) p. 21, recommendation 4.
49 PEPA, section 10(14)(a).
50 ibid.
51 id, section 10(14)(b).
52 ibid.
53 id, section 14(1).
54 id, section 14.
55 id, sections16 & 17.
56 id, section 24.
57 id, section 70.
58 id, section 70 (1)(d).
59 id, section 52
60 id, section 52.

The PEPA builds on the health, safety and environment standards set out in the EPA Act and the Environmental Regulations.[61] Before the commencement of petroleum activities, a contractor or licensee must submit to the PC a plan and supporting documentation evidencing the safety measures that they propose to implement.[62]
Contractors and licensees are also required to identify hazards and evaluate risks associated with their operations and ensure the safety of personnel.[63]

Further, they must implement and maintain preventive security measures to protect their facilities and wells from deliberate attacks, and at all times have in place an emergency preparedness plan to prevent, control and minimize accidents and emergencies which may lead to injury or pollution.[64] A licensee, contractor, sub-contractor or the GNPC is liable to reimburse the PC for the cost of measures taken to ensure safety where they fail to ensure the safety in the first place.[65]

4.2.2 Foreign Investment

The GIPC Act generally applies to all companies in Ghana, irrespective of industry.[66] Particularly, the GIPC imposes a registration and minimum capital requirement on companies having foreign shareholding.[67] For companies, fully-owned by a foreign entity, foreign capital of not less than US$500,000 in cash or capital goods or a combination of both, must be invested in the business by way of equity. Where the company is jointly owned with a Ghanaian, the foreign shareholder must invest foreign capital of not less than US$200,000 in cash or capital goods relevant to the investment or a combination of both and the Ghanaian joint venture partner must have no less than 10% equity interest in the company.[68]

As indicated above, the minimum capital requirements are of general application to foreign investments in all industries in Ghana. This explains why the amounts are relatively low, as compared to the capital typically required for upstream petroleum companies.

Registration with the GIPC entitles a company to fiscal benefits and incentives including (i) an immigration quota limited to the amount of the paid-up capital of the company; (ii) personal remittances of wages through authorised dealer banks; (iii) free transferability of dividends and profits; (iv) transferability of fees and charges in respect of technology transfer agreements registered under the Act; and (v) guarantees against expropriation.[69]

4.2.3 Management of Petroleum Revenue

The Petroleum Revenue Management Act (PRMA) (as amended), regulates the collection, allocation and management of petroleum revenue derived from upstream and midstream operations. The PRMA makes the GRA responsible for assessing, collecting and accounting for petroleum revenue due to the State under the PRMA.[70]

An entity that makes payment into the PHF must notify the GRA in writing of that payment,[71] among other things. The PRMA establishes three public funds, namely, the PHF, the GSF, and the GHF, and indicates how revenue accruing from petroleum operations are to be disbursed and utilised.[72] The PHF receives petroleum revenue due to the Republic and then disburses it in accordance with the PRMA.[73]

The gross receipts of the PHF include royalties, corporate income taxes, surface rentals, capital gains tax and any amount payable by GNPC as corporate income tax, royalty or dividends.[74]

61 id, section 73.
62 id, section 73(3).
63 id, section 74.
64 id, sections 75 & 76.
65 id, ection 79.
66 GIPC Act, section 1..
67 id, sections 24 and 27.
68 id, section 27.
69 id, secrion 26..
70 PRMA, section 3(1).
71 id., section 3(3).
72 PRMA sections 2,9 & 10
73 id, section 2.
74 id., section 26

The GNPC has foremost priority in the disbursement of petroleum revenue from the PHF, followed by the payment into the consolidated fund to support the national budget, and then to the Ghana Petroleum Funds for savings and investments.[75]

The PRMA also provides for disbursements from the PHF to meet exceptional purposes.[76] Exceptional purposes have been defined under the PRMA as withdrawals from the PHF necessary to meet tax refunds and the payment of management fees.[77]

Borrowing against the PHF and the assets of the Ghana Petroleum Funds is prohibited.[78] The PRMA further prohibits borrowing against petroleum reserves.[79] The GSF receives the portion of revenue from the PHF to be used for savings and investments for the purpose of creating a reserve fund to supplement public expenditure during periods of unanticipated petroleum revenue shortfalls.[80]

Conversely, the GHF receives excess petroleum revenue to create an endowment fund for future generations when petroleum reserves have been depleted.[81]

No other disbursements are permitted out of the PHF.
The PRMA established the PIAC as an independent statutory body with a mandate to promote transparency and accountability in the management of Ghana's petroleum revenue.[82]

This committee monitors stakeholder compliance with the revenue management provisions in the PRMA. The PIAC also provides a platform for public debate to inform the public on how funds are used in accordance with the development priorities of the country.[83]

4.2.4 Post-discovery Fiscal Regime

Like all others, companies operating in the upstream petroleum industry have an obligation to pay taxes.[84] Contractors, in particular, have an obligation to pay additional levies, including royalties, bonuses, and additional oil entitlement and acreage fees for the blocks they hold.[85] The rates for these levies are often prescribed in the relevant PAs.

With regards to taxes, the Income Tax Act repealed and replaced the PITL as the primary tax law of all sectors in Ghana, including the upstream petroleum sector.

Before this, there had been amendments to the previous Internal Revenue Act and passing of regulations in order to apply capital gains tax, thin capitalisation and transfer pricing to the petroleum operations as the State desired to take more benefit from its petroleum resources.

Unfortunately, the amendments to the Internal Revenue Act and the new regulations were passed after the State had already signed PAs containing freezing stabilisation clauses. The effect of the freezing stabilisation clauses was to prevent the State from applying subsequent changes in law to those PAs.[86]

Thus, the legislative changes in taxes could not be applied to the existing contractors who enjoy stabilisation rights as doing so would amount to a contractual breach of their PAs thereby opening up the State to law suits under international arbitration.[87] This implies that notwithstanding its repeal, the PITL continues to apply to the contractors who have rights of freezing stabilisation under their PAs.

Under the Income Tax Act, provisions exclusive to petroleum operations are provided under Part VI. The rate of corporate income tax applicable to a contractor is 35% or as otherwise stipulated in the PA.[88]

75 id., section 16(1) (as amended).
76 ibid.
77 id, section 24.
79 id., section 5(1) and 41.
79 id, section 5 (as amended).
80 id, section 9.
81 id, section 1 (2) (as amended).
82 id, section 51.
83 ibid.
84 PEPA, section 87.
85 id., section 85 to 89.
86 See article 26(2) of the WCTP, OCTP, DWT and DWCTP PAs.
87 All the PAs presently in force provide for international arbitration as the means for resolving disputes with the State.
88 Income Tax Act, section 63 & section 5 of the First Schedule.

Conditions for assessing a contractor's chargeable income for a year of assessment include: (a) the market value of petroleum disposed of; (b) compensation derived, whether under a policy of insurance or otherwise, in respect of a loss or destruction of petroleum; (c) amount derived from the sale of information pertaining to the operations; (d) a gain from the assignment or disposal of an interest in the petroleum right; (e) surplus in a decommissioning fund; (f) an amount received after production commenced as reimbursement of cost and premium to a sole risk party under the sole risk terms of a joint operating agreement; and (g) any other amount derived during the year from or incidental to the operations. [89]

Specific deductions which are allowed to be made from the assessable income include the annual rental charges and royalties, interest on fees and loans, contributions to pensions and provident funds approved by the PC, capital allowances, and any other amount incurred directly in the course of the petroleum operation.[90]

Expenses that are not allowed to be deducted from the assessable income include research and development expenditure, bonus payments made in respect of the grant of the petroleum licence and expenditure incurred as a consequence of a breach of the PA.[91]

Employees of petroleum companies are subject to personal income tax and the rates vary depending on their residency status and in accordance with the PAYE graduated scale for ordinary employees.[92] Subject to the terms of a PA, the gains or profit of an expatriate employee who is employed by a contractor or sub-contractor, who conducts petroleum operations exclusively, is liable to both income tax and withholding tax.[93]

It is noteworthy that the Income Tax Act finally addresses the longstanding issue of ring-fencing of petroleum operations. Where a contractor has multiple petroleum agreements, the operations under each block are considered to be separate operations and are to be taxed separately.[94] Further, where an area within a block is delineated as a development and production area (DPA), following the approval of a plan of development and operation, that area shall constitute a separate petroleum operation.[95] Any other operation carried outside the DPA is deemed a separate operation. [96]

4.2.5 Local Content

The Petroleum Local Content Regulations was the first detailed local content law to be passed in Ghana. They were enacted in 2013 to ensure the promotion of local content and participation in petroleum activities.[97] The purpose of the regulation is to increase the participation of Ghanaians in petroleum operations by requiring that contractors, licensees and other participants in the petroleum sector ensure that local content is a core component of their petroleum activities.[98]

In the area of equity and ownership, an IGC is to be given first preference in the grant of a PA or a licence.[99] It is also a condition that there must be, at least, a 5% equity participation of an IGC subject to variation by the Minister in certain circumstances, to qualify to enter into petroleum license or PA.[100] This 5% IGC equity participation requirement does not include the GNPC's equity participation in the petroleum license or PA,[101] and is not transferrable to a non-indigenous Ghanaian company.[102]

For service companies, a foreign company which intends to provide petroleum goods and services to a contractor, sub-contractor, licensee, GNPC or other allied entities, is required to incorporate a Ghanaian joint venture company (JVCo) with an IGC and afford that IGC an equity participation of at least 10%.[103] The implementation of this requirement is governed by the PC's published Guidelines for the Formation of Joint Venture Companies in the Upstream Petroleum Industry of Ghana, 2016.

89 id, section 66
90 id, section 67(1)
91 id, section 67 (2).
92 Id, First Schedule.
93 id, section 71 (3).
94 id., section 64(1).
95 id., section 64(2)(a)
96 id., section 64(2)(b).
97 Petroleum Local Content Regulations, regulation 2.
98 id, regulation 3.
99 id, regulation 4 (1).
100 id, regulation 4(2) and 4(3).
101 id, regulation 4 (2).
102 id, regulation 4 (3) and 4 (5)
103 id, regulation 4 (6).

The guidelines state that the JVCo is the only lawful vehicle through which the foreign company can transact its petroleum operations in Ghana. In addition, the guidelines recommend that the JVCo must have, as part of its purpose, a detailed plan for the transfer of technology and know-how to the IGC, which must be submitted to the PC for approval. In its operational activities, a contractor or other entity operating in the upstream industry must establish and implement a bidding process that gives preference to IGCs in the procurement of goods and services.[104]

The evaluation of contract must not be based on the lowest bidder alone – a contract must be awarded to an IGC where the IGC's bid is not more expensive than the lowest bidder by more than 10%.[105] A contractor or licensee of the petroleum sector may only retain the services of indigenous companies in respect of legal, financial and insurance services.[106] The insurance requirements are discussed in paragraph 4.2.6 (Liability and Insurance).

To oversee and enforce the engagement of IGCs in petroleum operations, the Petroleum Local Content Regulations requires a contractor and other entities to submit a local content plan to the PC before commencement of petroleum activities.[107]

A local content plan must, among other things, specify sub-plans on employment and training, research and development and technology transfer.[108] The local content plan must also contain detailed provisions to ensure that first consideration is given to services provided and goods manufactured in the country. Qualified Ghanaians must also be given first consideration with respect to employment and adequate provision must be made for on-the-job training of Ghanaians in the plan.[109]

The Petroleum Local Content Regulations imposes very punitive sanctions for breaches, for example, a fine ranging from GHS1,200,000 to GHS3,000,000 or a term of imprisonment of not less than two years and not more than five years or both for knowingly making false statements in submissions to the PC. [110]

A foreigner and a citizen who front to the PC to misrepresent that an entity is an IGC will be liable to a fine between GHS1,200,000 to GHS3,000,000.[111] Where a person fails to conform to the minimum local content requirements under the regulations, that person will be liable to pay an administrative penalty to the PC of GHC2,400,000.[112]

4.2.6 Liability and Insurance

Petroleum activities conducted under a PA or under a transportation, treatment or storage license must be insured at all times in accordance with the Insurance Act.[113] The insurance must cover protection against damage to petroleum activities, pollution damage and other liability towards third parties, wreckage removal and clean-up resulting from accidents and any additional insurance cover that the PC may determine.[114] Employees of the contractor, licensee or sub-contractor engaged in these petroleum activities must also be covered by insurance.[115]

The Petroleum Local Content Regulations specifically requires all participants in the petroleum industry to comply with the Insurance Act.[116] Thus, all insurable risks and activities in the petroleum industry must be insured by an indigenous insurance or reinsurance company.[117]

A person may only enter into an insurance contract with an offshore insurer where the insurance capacity of indigenous companies has been exhausted and the National Insurance Commission (NIC) has authorised the engagement of a foreign insurer.[118]

104 id, regulation 11
105 id, regulation 12(3)
106 id, regulation 33 & 29
107 id., regulation 7
108 id, regulation 9(3)
109 Petroleum Local Content Regulations, regulation 9
110 id regulation 46 (1)
111 id, regulation 46 (2) and 46 (3)
112 id, regulation 46 (5)
113 PEPA, section 92
114 id, section 92(2) & (7)
115 id., section 92(2)(d)
116 Petroleum Local Content Regulations, regulation 27
117 ibid
118 Insurance Act, sections 37 and 38; Petroleum Local Content Regulations, regulation 28

In order to efficiently optimise the participation advantages given to indigenous Ghanaian insurance companies in the upstream petroleum sector under the Insurance Act and the Local Content Regulations, the PC and the NIC, collaboratively developed a Protocol on the Oil and Gas Insurance Placement for the Upstream Sector. The protocol, which came into force on 17 October 2014, is meant to ensure compliance with the provision of insurance in the upstream petroleum sector.[119] It sets out the procedure for obtaining insurance in the upstream petroleum sector.[120]

Also, in 2013, the Non-Life (General) Insurance Members of the Ghana Insurers Association formed a consortium known as the Ghana Oil and Gas Insurance Pool (GOGIP). GOGIP was to serve as a means for members of the association to pool their resources to assist with the underwriting of oil and gas risks in Ghana.[121]

GOGIP was formed to resolve the fragmentation of the Ghanaian insurance sector which rendered the insurance companies ineffective and uncompetitive in underwriting petroleum insurance businesses. As a result of the fragmentation, foreign insurance companies had, taken a commanding lead in the insurance activities in the petroleum sector.[122]

GOGIP is an exclusive body mandated by the NIC to be the representative of all the licensed insurance companies in Ghana and to overcome the challenge of low participation by Ghanaian insurance companies in the upstream petroleum sector.[123]

With its formation, all insurance risks for the petroleum sector are insured locally through GOGIP. Any person who wishes to obtain offshore insurance services must ensure that the Ghanaian insurance companies have been granted the right of first refusal and the written approval of the NIC has been obtained.[124]

GOGIP has also been charged with the mandate of growing the country's expertise in the underwriting of complex insurable risks in the upstream petroleum sector.[125]

4.2.7 Subsidiary Legislation

Other significant regulations passed in the upstream exploration, development and production of oil and gas post discovery include:

The Petroleum Measurement Regulations

This is to ensure that there is accurate measurement of petroleum resources which will be used as a basis for the efficient determination and disbursement of petroleum revenue accruing to the stakeholders.[126] It applies to the planning, design, operation and maintenance of the technology and methods used for measuring and determining allocated quantities of petroleum produced, transported or sold.

This specifies the format, contents and standards required for the preparation and submission of geophysical, geological and production data for petroleum activities, to support the efficient exploitation of Ghana's petroleum resources.[127] All such petroleum data is the property of the Republic.[128]

The regulations apply to the reporting and management of petroleum data obtained from the conduct of petroleum activity within the Ghanaian jurisdiction.[129] It further imposes reporting obligations on a licensee in respect of reconnaissance activity and exploration drilling.[130]

The Petroleum HSE regulations

These regulations promote high standards of health and safety by providing comprehensive basic health and safety requirements with which companies operating in the upstream petroleum sector must comply.[131]

119 Protocol for Oil and Gas Insurance Placement for the Upstream Sector, pg. 13
120 ibid.
121 Ghana Insurers Association, 'History of GIA' (ghanainsureres.org) http://ghanainsurers.org.gh/history-of-gia/ accessed on 19 May 2020.
122 ibid
123 Protocol for Oil and Gas Insurance Placement for the Upstream Sector, Guideline No. 3
124 id, pg. 4
125 Ghana Insurers Association, 'History of GIA' (ghanainsureres.org) http://ghanainsurers.org.gh/history-of-gia/ accessed on 19 May 2020.
126 Petroleum Measurement Regulations, regulation 2.
127 Petroleum Data Management Regulations, regulation 2
128 id, regulation 3
129 id, regulation 1
130 id, regulation 21 & 26
131 Petroleum HSE Regulations, regulation 1

These standards include the requirements to prepare and update a comprehensive health and safety plan as well as an emergency preparedness plan for efficiently handling hazard, pollution and accident situations in the upstream sector.[132]

Adherence to these regulations is intended to facilitate the prevention of the adverse effects of petroleum activities on health, safety and the environment.[133]

The Petroleum General Regulations

The Petroleum General Regulations – these provide the procedure, terms and conditions for the grant of PAs and licences in all upstream petroleum activities. These include the tender process or direct negotiation process for the grant of a PA; the qualification requirements for operators; licence application processes; requirements for the various phases of exploitation and production; and the petroleum activities of the GNPC.[134]

It also sets out the criteria for the grant of a license for the installation and operation of a facility for transportation, treatment or storage of petroleum.

The Petroleum Fees and Charges Regulations

It also sets out the criteria for the grant of a license for the installation and operation of a facility for transportation, treatment or storage of petroleum.

The Petroleum Fees and Charges Regulations

These regulations prescribe the fees and charges that are payable by contractors and subcontractors in order to obtain the permits and approvals imposed by the regulations.

These include fees for registration with the PC as a contractor or subcontractor,[135] fees for permits to install and operate facilities for transportation, treatment and storage of crude oil,[136] fees for permits to lift crude oil,[137] and for fees for the registration of assignment of interests in a petroleum agreement or transfer of shares.[138]

4.3 Enforcement and Dispute Resolution

One of the PC's functions as the sector regulator is ensuring compliance with national policies, laws, regulations and agreements related to petroleum activities and promoting local content and local participation in petroleum activities.[139] In furtherance of this function, the PC is empowered to impose sanctions on persons who violate the relevant laws in the manner prescribed by those laws.
The upstream petroleum laws impose a range of potential sanctions for various infractions of the law, such as criminal convictions potentially leading to imprisonment or the imposition of fines, administrative penalties, cancellation of contracts, withholding approvals and permits of contractors, and expunging the names of subcontractors from the petroleum register.

It is widely accepted that sanctions are intended to be punitive and to serve as a deterrent to others from violating the law. Thus, in our view, the PC cannot be perceived to be lenient in its application of the petroleum laws and the imposition of sanctions, as such a perception is likely to result in a disregard for the law by persons operating in the upstream petroleum sector.

The PC often cautions against committing offences, particularly the offence of deliberately concealing the fact that a company is not an IGC ("fronting"). A person who fronts is liable on summary conviction to a fine of between GHS1.2 million and GHS3 million or to term of imprisonment between one and two years, or both a fine and imprisonment.[140] Although there have been rumours/ allegations of individuals fronting, to date, we are not aware of any convictions for fronting or other offences of the petroleum laws.

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132 id, regulation 9
133 id, regulation 1
134 Petroleum General Regulations, regulations 9, 15, 5 & 34
135 Petroleum Fees and Charges Regulations, regulations 1, 2 and 3
136 id, regulation 5
137 id., regulation 6
138 id., regulation 13
139 Petroleum Commission Act, section 3(c) and (f).
140 Petroleum Local Content Regulations, regulation 46(2).

Notwithstanding the above, the PC has imposed various sanctions by way of administrative penalties in respect of other offences. Where a person awards a subcontract without informing the PC in contravention of the Local Content Regulations,[141] the PC may apply one of two prescribed penalties – cancellation of the offending contract or the imposition of a financial penalty. [142]

The exercise of any discretion by the PC is limited by the language of the regulation, under which a sanction is to be imposed. So, where the PC does not cancel a contract, for instance, because the contract has already been performed, the PC must impose the financial penalty. In this circumstance, the financial penalty is fixed at 5% of the value of the proceeds obtained from the petroleum activity in respect of which there was a breach, capped at the Ghana Cedi equivalent of US$5 million.

Two opinions have emerged regarding the interpretation of the term 'proceeds' in this context. One is that 'proceeds' means the total contract value, that is, the total amount paid under the contract or revenue, and the other is that 'proceeds' refer to "profit" and consequently cannot include the costs incurred in performing the contract. The PC has taken the position that 'proceeds' mean revenue.

It is our view that the PC may have taken this position because of its punitive effect, since calculating the penalty on revenue rather than profit would yield a higher amount, and would, therefore, be more effective as a sanction.

Except as indicated above, the PC does not have any discretion on the range of financial penalties to impose with respect to the administrative penalties prescribed by the Local Content Regulations. This is because the administrative penalties prescribed under the Local Content Regulations are expressed as absolute amounts and not in ranges. Thus, the PC does not have the power to be lenient, and must, in imposing administrative penalties, enforce the law as stated. [143]

4.3.1 Right of appeal

A person aggrieved by a decision of the PC is afforded a right of appeal under the Local Content Regulations. The first step is to lodge a complaint with the Minister within 30 days of receipt of the PC's decision.[144] The Minister similarly has 30 days to consider and take a decision on the complaint.[145] The aggrieved person may commence legal action if the Minister fails to respond to the complaint after 30 days, or if he is dissatisfied with the decision of the Minister.[146]

4.3.2 Maritime border disputes

4.3.3 Ghana and Côte d'Ivoire

A year after Ghana's discovery of commercially viable quantities of oil and gas in 2007, the Republic of Côte d'Ivoire staked claim to parts of the area covered by the discovery, alleging that Ghana's exploration activities in the disputed area were infringing on its maritime boundary and consequently its sovereign rights.

Ghana instituted arbitration proceedings under Annex VII to the United Nations Convention on the Law of the Sea after the parties failed to settle the matter by amicable negotiation.

On 3 December 2014, the Parties entered into a Special Agreement to submit the maritime boundary dispute to a Special Chamber of the International Tribunal for the Law of the Sea (the Special Chamber). Whilst the Parties agreed that the land boundary terminus and starting point for the maritime boundary was at Boundary Pillar 55 (BP 55), the Parties disagreed on the points along the low-water of their coasts from which the boundary was to be constructed, the so-called base points.

141 id, regulation 13.
142 id, regulation 46(7).
143 id, regulation 46 (4) to (7)
144 Petroleum Commission Act, section 20(1)
145 id, section 20(2)
146 id, section.20(3)

It is widely accepted that sanctions are intended to be punitive and to serve as a deterrent to others from violating the law. Thus, in our view, the PC cannot be perceived to be lenient in its application of the petroleum laws and the imposition of sanctions, as such a perception is likely to result in a disregard for the law by persons operating in the upstream petroleum sector.

On 27 February 2015, Côte d'Ivoire requested that the Special Chamber grant certain temporary measures which would remain in force until judgment in the substantive case was given in 2017. The temporary provisional measures were in effect a moratorium on new drilling activities in the disputed area. The Special Chamber granted Côte d'Ivoire's request for temporary provisional measures on 25 April 2015. The temporary measures affected Ghana and operators such as Tullow, Kosmos and Hess.

Ultimately, the Special Chamber rejected Côte d'Ivoire's claim and accepted Ghana's arguments that delineation in this instance was properly done using the equidistance relevant circumstances methodology. This is the concept that a nation's maritime boundary should conform to a median line which is equidistant from the shores of its neighbouring nation-states.

The Special Chamber held that the equidistance/relevant circumstances methodology would achieve the most equitable result and there were no compelling reasons making it impossible or inappropriate to draw a provisional equidistance line.

The Special Chamber ruled that Côte d'Ivoire's arguments in support of its claim were not strong enough, rejecting their argument that the most appropriate approach for delimiting the maritime border was the angle bisector methodology, which would be based on the general direction of the coastal geography of the two countries, taking irregular coastline features into account.

Notwithstanding its ruling, the Special Chamber did find that the geographic coordinates used by both Ghana and Côte d'Ivoire in plotting the basepoint corresponding to the land boundary terminus point were inaccurate. The Special Chamber plotted new geographic coordinates for that point and then, using the equidistance/ relevant circumstances methodology, delimited the maritime boundary between the countries, both within and beyond 200 nautical miles from the respective coastlines. The resulting boundary will occasion some adjustment to blocks on both sides of the boundary and may give Ghana more territory than it initially argued for.

The ruling of the Special Chamber, which is final and binding, and cannot be appealed on any grounds, has brought closure to the maritime dispute between Ghana and Cote d'Ivoire, which had lasted over seven years.

The decision provided clarity and certainty of the delimitation of the maritime boundary between Ghana and Côte d'Ivoire and created a sense of stability for prospective investors. With the decision came the lifting of the moratorium that had been put in place, so Ghana could continue with its petroleum operations. The contractors could therefore move into the area and commence petroleum operations in compliance with their amended work programmes.

4.3.4 Ghana and Togo

It has been reported that the Republic of Togo informed Ghana that it does not recognise the maritime border between the two countries. Between December 2017 and May 2018,[147] Togolese authorities prevented two seismic vessels from Ghana from undertaking seismic activities in the deep sea in the territory that approaches Togo.[148] Arrangements were put in place for the parties to meet and resolve the issue amicably. [149]

Survey teams from both countries met in July 2019 to adopt a common methodology for the conduct of field work to establish the Land Boundary Terminus (LBT) or Border Pillar 1 as a prerequisite for drawing the maritime boundary between the two countries.[150]

Both survey teams presented a report of the 1929 Boundary Commission signed by the French and the British commissioners and related maps and agreed to use the report as their working document. The fifth meeting of the Technical Committee on the Ghana/Togo maritime boundary negotiations was held in Accra, Ghana, and it furthered the exchange on technical data and transitory measures to resolve the issue of maritime boundary delimitation.[152]

147 Graphic Online, 'Maritime Border Dispute Brews between Ghana, Togo' (graphic.com.gh, 01 June 2018) https://www.graphic.com.gh/news/general-news/maritime-border-dispute-brews-between-ghana-togo.html accessed 18 May 2020
148 ibid
149 ibid
150 All Africa, 'Ghana, Togo Meet Over Maritime Boundary Dispute' (allafrica.com, 23 August 2019) https://allafrica.com/stories/201908230539.html accessed18 May 2020
151 ibid
152 Togo First, 'Togo-Ghana Maritime Border Dispute: Could an amicable resolution be nearing?' (togofirst.com, 29 August 2019) https://www.togofirst.com/en/economy/2908-3756-togo-ghana-maritime-border-dispute-could-an-amicable-resolution-be-nearing accessed 18 May 2020

4.4 Case Review: Ndebugre v Attorney General & Others John Akparibo Indebugre V The Attorney-General and 2 Ors [20/04/2016] Writ No. J1/5/2013

4.4.1 Introduction

Given the substantial nature of investments that international oil companies make in order to carry out their obligations under the terms of a PA, litigation of disputes in the courts are often rare in the industry, even on a global scale. The primary aim of these companies is to protect their investments by ensuring that the government and the State is not made an adversary. The situation is not any different in Ghana. A reason for the low number of actions is the fact that international arbitration is a customary provision in all the PAs as the means of dispute resolution.

Usually, the international arbitration will be preceded by negotiation and consultation among the senior personnel of the companies and the State. This often leads to the amicable resolution of disputes between the State and the international oil companies.

The case in review was a constitutional case brought to the Supreme Court by a lawyer and former member of Parliament, Mr. John Akparibo Ndebugre. In this case, the Supreme Court interpreted ratification as used under Article 268(1) of the Constitution to mean approval relying on the language of article 269(2) of the Constitution. The Supreme Court further made the major determination that natural resource exploitation agreements ratified by Parliament in accordance with Article 268(1) required further parliamentary approval in order to be terminated. The Supreme Court, however, refused to invalidate the termination of a PA that had been done without Parliament's approval based on some interesting observations which are discussed further below.

4.4.2 Facts of the Case

On 24th October 2008, the Government of the Republic of Ghana, the GNPC, Aker ASA and Chemu Power Company Limited (together the "Parties") entered into a PA in respect of the South Deepwater Tano contract area (the "SDWT PA"). The SDWT PA was ratified by Parliament in accordance with article 268(1) of the Constitution on 5 November 2008.

Aker ASA, a Norwegian company was notified by the GNPC of the need to register a subsidiary locally and assign its interest in the SDWT PA to the local subsidiary pursuant to section 23(15) of the PNDCL 84, the then applicable law.

Section 23(15) of PNDCL 84 required a contractor who was incorporated outside the country to register a company in Ghana, and for the locally registered company to be the relevant party to the PA. Thus, Aker ASA having failed to register a subsidiary in Ghana and make that subsidiary a party to the SDWT PA was in breach of this requirement.

Aker ASA, initially in disagreement with the GNPC's view, eventually incorporated a local company and sought to assign its interest in the SDWT PA to the local company. When Aker ASA applied to the Minister and the GNPC for the respective approval and consent to the assignment, the Minister refused to approve the assignment. The Minister informed Aker ASA of his intention to terminate the SDWT PA on grounds of Aker ASA's non-compliance with section 23(15) of the PNDCL 84. In December 2011, the Parties concluded a termination agreement under which the Government agreed to pay US$29,000,000 to Aker ASA for the transfer of seismic data that Aker ASA had acquired while carrying out its obligation under the SDWT PA.

Following the termination agreement, the plaintiff invoked the original jurisdiction of the Supreme Court under Article 2(1) of the Constitution for a declaration that the termination of the SDWT PA without recourse to Parliament for approval contravened the letter and spirit of Article 268(1) of the Constitution and, therefore, null and void. The plaintiff, thus, sought an order for the recovery of the US$29,000,000 paid to Aker ASA as compensation for the transfer of the seismic data to the State flowing from the alleged unconstitutional termination agreement.

The 1st defendant opposed the plaintiff's argument and claimed that parliamentary approval was not required for the termination of a ratified PA.

It Given the substantial nature of investments that international oil companies make in order to carry out their obligations under the terms of a PA, litigation of disputes in the courts are often rare in the industry, even on a global scale. The primary aim of these companies is to protect their investments by ensuring that the government and the State is not made an adversary.

Accordingly, the Supreme Court set down the following issues for determination:

a) whether or not the SDWT PA was contrary to section 23(15) of PNDCL 84;
b) whether parliamentary approval was required for the termination of the SDWT PA; and
c) whether the $ 29,000,000 payment made to Aker ASA was recoverable.

4.4.3 The Supreme Court's Decision

Compliance with section 23(15) of PNDCL 84

With respect to section 23(15) of PNDCL 84, the Supreme Court established that a foreign company which seeks to take advantage of the law to undertake petroleum operations in Ghana must register a subsidiary company in Ghana with full powers of management.

The court continued that the local subsidiary is required to be a signatory to the PA. In the court's opinion, it was a logical conclusion that an agreement entered into without a local subsidiary in place and without the signature of the local subsidiary as party is invalid.

The Supreme Court concluded that since the SDWT PA was signed on 24 October 2008 and the Aker ASA's local company was incorporated thereafter on 29 October 2008, the SDWT PA was invalid for breach of section 23(15) of PNDCL 84. The Minister was, thus, justified in terminating the SDWT PA for breach of the law.

Parliamentary approval of termination

The Supreme Court noted that article 268(1) of the Constitution did not specify the role of Parliament with regards to the termination or even variation of an agreement that has been ratified by Parliament. It was, however, reasonable and in accord with common sense for all the parties that were involved in bringing the agreement into force to have a role to play in its termination.

On a purposive interpretation of Article 268(1) of the Constitution and in the spirit of good governance, the Supreme Court held that the approval of Parliament is required for a variation or termination of an agreement that has been previously ratified by Parliament. This is especially so where the funds that are appropriated by the executive to satisfy any penalty payments or other compensation that may arise from the termination of the agreement must be approved by Parliament. The only exception may be where Parliament has delegated the right to approve the termination of such agreements to the executive as per law or by the terms of the ratified agreement.

The Supreme Court found that Parliament, in this case, had ceded its right to approve a termination of the SDWT PA by unreservedly ratifying the SDWT PA which authorized the Minister and/or the GNPC to terminate the SDWT PA without recourse to Parliament under article 23.

In the court's view, nothing prevented Parliament from requiring that its approval be sought in the case of a termination. In the absence of such a provision, the Minister acted within his mandate under article 23 when he terminated the SDWT PA without recourse to Parliament.

Validity of the $ 29,000,000 payment

The Supreme Court held that the US$29,000,000 paid to Aker ASA for transfer of the acquired seismic data to the GNPC was lawful. The court distinguished the circumstances of this case from its holdings in the Amidu (No. 3) v Attorney-General, Waterville Holdings (BVI) Ltd & Woyome (No. 2) (2013-2014) SCGLR 606; Amidu (No.2) v Attorney-General & Isofoton SA & Forson (No.1) (2013-2014) 1 SCGLR 581 (together the "Amidu Cases").

In the Amidu cases, the Supreme Court held that restitution (restoration of parties to their pre-contractual positions) was not available to persons who were parties to an agreement which violated the Constitution.

The court took the view that the US$29,000,000 was not a restitution payment or payment for termination of the agreement per se. The payment was to enable the GNPC acquire the data gained by Aker ASA from undertaking exploration activities in the SDWT block and, therefore, constituted a separate business deal from the invalid SDWT PA.

It was, however, reasonable and in accord with common sense for all the parties that were involved in bringing the agreement into force to have a role to play in its termination. On a purposive interpretation of Article 268(1) of the Constitution and in the spirit of good governance, the Supreme Court held that the approval of Parliament is required for a variation or termination of an agreement that has been previously ratified by Parliament. This is especially so where the funds that are appropriated by the executive.

4.4.4 Review and Remarks

Implications of the Decision

The Supreme Court's decision in this case is of critical importance in understanding the watchdog role of Parliament in ensuring accountability and probity in the execution and general implementation of natural resources contracts (and in fact other international business transactions by parity of reasoning).

The decision suggests that where Parliament rubberstamps agreements presented to it by the executive, Parliament would be deemed to have authorised the executive to perform all the acts contemplated by the agreement without further recourse to it. Such acts may include the right to renegotiate or vary the contract, extend or renew the term, assign the rights, and/or terminate the agreement (as was the case herein) and other usual rights conferred on parties under a contract.

Thus, it is very important for Parliament to properly scrutinise all contracts presented to it for ratification so as to ensure that it is not blindly authorising the executive to unilaterally perform a contract that may be of such national importance and, thus, requires a minimum level of parliamentary oversight to ensure that the interests of country are generally protected.

Parliamentary approval not conferring legislative status

As noted in the minority opinion by His Lordship, Atuguba JSC, the mere ratification by Parliament of an agreement does not give the agreement the status of law. Agreements entered into by the executive only required parliamentary approval in the interest of checks and balances.

These checks were not to be considered as undue interference by Parliament in the performance of the executive's role of governance as that would defeat the principle of separation of powers. The learned Justice further cautioned against undue interference with the operation of contract by Parliament as that could lead to damaging the commercial image of the government to the detriment of the public interest.

The above view, though by the minority of the Supreme Court, confirms the position that no amount of ratification by Parliament of a commercial contract will give the contract the status of law. Often times the question is asked whether a contract entered into by Government that has been ratified by Parliament could contravene or amend a provision of existing law. The decision of the court in this case settles that issue. A provision of law may only be overridden by another law of equal or higher hierarchy. An agreement by Government, being an executive act, does not become a legislative act merely by parliamentary ratification.

Validity of the $ 29,000,000 Payment

While we concede that this case, unlike the Amidu Cases, related to a breach of a mere statute and not the Constitution, we disagree with the reasoning of the Supreme Court majority in holding that the payment was valid and not arising from the invalid SDWT PA.

The majority, led by His Lordship Benin JSC's characterisation of the payment as a separate business deal necessary to give the GNPC access to the seismic data acquired through exploration activities by Aker ASA, disregarded the fact that all data acquired by a contractor, while undertaking exploration or other petroleum operations automatically belong to the GNPC.[153] There is, therefore, no justification for the GNPC to pay for the value of that data which, by operation of law, is the property of the GNPC.

However, although there was no obligation on the GNPC to pay for the value of the seismic data, as the default owner, due to the peculiar circumstance of the case, the US$29,000,000 should have been construed as a restitution payment or compensation for the work done in acquiring the seismic data, and not as a separate business deal. Thus, the validity of the payment should have been examined with the lens of the holdings in the Amidu Cases, being a restitution payment made on the basis of an illegal contract.

For the above reason, we agree instead with Justice Atuguba's views expressed on the matter. Atuguba JSC did not attempt to distinguish the payment from a restitution payment. Rather, His Lordship explained that, unlike the Amidu Cases which involved a breach of the Constitution, this case bordered on the breach of a mere statute.

The learned Justice then quickly clarified that the availability of the equitable remedy of restitution was not conclusively dependent on whether the breach was constitutional or statutory. Rather, the determination was to be made flexibly, considering the facts of each case. In this case, the learned Justice was of the view that considering the controversy surrounding the proper interpretation of

153 PNDCL 84, section 23(2); PEPA, section 52(1).

section 23(15) of PNDCL 84 and the fact that Parliament itself had ratified the SDWT PA, it would be unjust to deny Aker ASA a refund of the US$29,000,000 spent on exploration activities on the block.

Further, even if it is assumed that the Supreme Court were right in holding that the US$29,000,000 payment was a separate business deal to give GNPC the benefit of the seismic data and, therefore, not arising from the illegal SDWT PA, then this separate deal constitutes an international business transaction which requires parliamentary approval pursuant to article 181(5) of the Constitution. This is because the Government, through the Minister, was a party to this deal which had a significant foreign element.[154]

The contract was with Aker ASA, a foreign company having its central management and control exercised in Norway. Accordingly, the termination agreement ought to have been submitted to Parliament for approval as an international business transaction.

4.5 Trends and Developments

4.5.1 Exploration within producing fields

Following calls by contractors, the Petroleum General Regulations has been recently amended to allow for the drilling of more wells within existing producing fields where the contractors identify prospects of outlying petroleum reserves.[155]

This amendment is expected to be a game changer to increase oil production at minimum additional cost, and make existing PAs more attractive while incentivising other international oil companies considering investment opportunities to choose Ghana, as the economics of exploring in Ghana may be more compelling.[156] Contractors seeking to take advantage of this amendment would have to apply to the Minister to that effect.[157]

The amendment is also expected to result in increased revenue for the State from petroleum activities in the short-term through increased GNPC participation with respect to the prospect and/or additional bonus payments.[158]

The risk with the amendment is, however, that the nation's reserves may be depleted at a faster rate. There were concerns that authorising contractors to continue exploration operations in a producing field would diminish the Government's revenue from taxes and its participating interests in the producing fields as the contractors would seek to offset the costs of the exploration operations from the receipts from petroleum sales.

This concern is however addressed in the amendment which prohibits the charging of exploration costs to the receipts of the existing discoveries.[159] The contractor may only get a reimbursement of those exploration costs where it makes a commercial discovery in respect of the exploration.[160]

4.5.2 Proposed amendments to local content law

The Deputy Minister of Energy with responsibility for the petroleum sector, Dr. Mohamed Amin Adam, indicated at a conference that the Ministry was considering amendments to the Petroleum Local Content Regulations as a means of ensuring real local participation in the upstream sector.[161]

The objective of the amendments would be to ensure real capacity building amongst IGCs and to make it more difficult for IGCs to front for international oil companies. Whilst no details have been given as to how this objective would be achieved, the Deputy Minister did indicate that a multi-agency approach would be adopted to the enforcement of local content laws and the approach would include the PC and, among others, the Registrar-General's Department and the Ghana Revenue Authority.

4.5.3 Proposal to access GHF monies in emergency situations

In light of the COVID-19 pandemic, the Minister of Finance, Mr. Ken Ofori-Atta, indicated that Government was considering amending the PRMA to permit withdrawals from the GHF in instances of national emergency.

It was unclear what expenditures would trigger such a withdrawal from the GHF. This was met with strong resistance from the opposition party and from public interest groups who raised as a compelling argument the intended purpose of the GHF, being the protection of petroleum revenue for future generations of Ghanaians. Indeed, PIAC has suggested that in order to provide any amounts required for COVID-19 related expenses the Government could make savings in its planned ABFA expenditure or apply monies from the GSF.

154 In the renowned Balkan Energy case, the Supreme Court noted that a contract having a significant foreign element to which the Government was a party was subject to approval by Parliament under article 181(5) of the Constitution.
155 Petroleum (Exploration and Production) (General) (Amendment) Regulations, 2019 (LI 2390), regulation 5.
156 GH Headlines, 'Petroleum Laws to be Amended; Higher Oil Production Targeted' (ghheadlines.com, 01 November 2019) http://ghheadlines.com/agency/ghana-web-/20191101/132304717/petroleum-laws-to-be-amended-higher-oil-production-targeted. accessed on 03 June 2020.
157 Petroleum General Regulations (as amended), regulation 29(3).
158 id, regulation 29(7).
159 id, regulation 29(5).
160 id., regulation 29(6).
161 Reporting Oil and Gas, 'Energy Ministry Plans Review of Petroleum Laws to Protect Local Content in Upstream Sector' (reportingoilandgas.org, 03 October 2019) http://www.reportingoilandgas.org/energy-ministry-plans-review-of-petroleum-laws-to-protect-local-content-in-upstream-sector/ accessed on 15 April 2020; Modern Ghana, 'Government Moves to Review Oil and Gas Local Content Laws' (modernghana.com, 21 November 2019) https://www.modernghana.com/news/968881/government-moves-to-review-oil-gas-local-content.html accessed on 15 April 2020.

4.5.4 Further guidelines from the Petroleum Commission

The PC is developing guidelines on technology transfer, HSE, data management, among others. The Chief Executive of the PC, Mr. Egbert Faibille, announced this at the 6th Local Content Conference and Exhibition in November 2019.

It is expected that these new guidelines would go a long way to aid the effective implementation of the laws and regulations governing upstream petroleum operations.

4.5.5 Monetisation of oil revenue

An area of concern continues to be the utilization of oil revenues for the development of the country and, particularly, in the areas where upstream operations are carried out. Ghana's extractive history has many examples of the local communities feeling insufficiently recompensed for their contribution to national coffers by way of economic development.

In a bid to provide a lasting legacy, gold royalties from 2020 onwards are being monetised by way of creation of a royalties company and the sale of some of the shares in that company through a dual listing of the company on the London Stock Exchange and the Ghana Stock Exchange. The monetisation is expected to raise approximately US$500 million for the nation through the share sale and provide a regular income stream by way of dividends payable to the Government by virtue of its shareholding in the company.

It has been proposed that the PRMA be amended so that the oil revenue allocation to the ABFA be revised, and part of the allocation be monetised in the manner of the gold royalties. It remains to be seen whether the funds raised through monetizing the gold assets are employed in increasing investment in education, healthcare and critical infrastructure and whether the idea to monetise petroleum revenue gains any traction.

Section conclusions

Whilst there has been substantial actual and proposed development in the upstream petroleum sector as discussed in this report, particularly at paragraphs 4.2 and 4.5, there are some specific steps that must be taken in order to develop a very viable and robust Ghanaian upstream sector that would ensure that our petroleum resources are translated into tangible national development.

For instance, revenue distributions to the GNPC, the ABFA and the Ghana Petroleum Funds must be in accordance with the PRMA. Especially, the Government must commit not to allocate revenues to the ABFA exceeding the upper limits prescribed by the PRMA, i.e., not more than 70% of the projected benchmark revenue for any given year and must provide accurate and reliable information to PIAC that shall inform the PIAC's credible reporting on the use of petroleum revenue.

Also, in exercising the Minister's discretions in relevant matters, fair and adequate consideration must be given to the advice of the PC in instances where the law requires such consultation. This would ensure that the Energy Minister makes informed decisions devoid of political connotations that would advance the objects of the industry laws.

Further, while we laud the Government's mooted amendment of the Petroleum Local Content Regulations to guarantee real local participation in the industry, we also urge the Government and other stakeholders to ensure the creation of a fair environment for all Ghanaians to take advantage of the opportunities in the sector. Incidents of politicians and other politically-exposed persons who, by virtue of their positions, seize available opportunities in the sector for their selfish interests have become too rampant.

Foreign companies are pressured to select politically exposed/affiliated companies that are only created for such purposes, and have no demonstrable technical expertise and financial muscle to meet industry requirements. It is troubling that foreign companies are unduly influenced to sideline their preferred choices of capable local partners who satisfy the detailed due diligence processes informing the foreign companies' selection.

The effect is that local participation in the sector is assumed by a select minority, whereas the independent companies are deprived of the opportunity to gather more experience and grow into strong and reputable local companies that can, eventually, take over control of the sector from foreign companies.

Nevertheless, we consider the present legal framework of the upstream industry to be a tremendous improvement as compared to the pre-commercial discovery regime. For instance, the PEPA makes some very important strides in providing a framework to improve transparency in relation to the award of oil blocks and in relation to oil industry activities in general. This framework has culminated in the establishment of the petroleum register[162] and the conduct of Ghana's maiden petroleum licensing round.

162 The register may be assessed online at https://www.ghanapetroleumregister.com; accessed on 02 June 2020.

4.6 Review of amendment to Aker Energy Petroleum Agreement (Deep Water Tano/ Cape Three Point)

- by Dr. Thomas Kojo Stephens*[163]

4.6.1 Background

On the 8th of February 2006, a Petroleum Agreement was signed between Hess Ghana Exploration Limited on one hand, and the Government of Ghana, represented by the Minister for Energy and the Ghana National Petroleum Corporation (GNPC), on the other, in respect of the Deepwater Tano Cape Three Points Contract Area, offshore Ghana.

The said Petroleum Agreement was ratified on 19th July 2006 by Parliament in accordance with Article 268 of the Constitution, titled Parliamentary Ratification of Agreements Relating to Natural Resources. The term of the Agreement,[164] a maximum of thirty (30) years, complied with Section 12 of the Petroleum (Exploration and Production) Act, 1984 (PNDCL 84).

Pursuant to a Sales and Purchase Agreement dated 16th February 2018, Aker acquired all the shares in Hess (Ghana) Limited, and became the sole owner of Hess Ghana Exploration Limited. The transaction was approved by the GNPC on 12th April 2018 and by the Minister for Energy on 21st May 2018. Thus, Aker took over the Deepwater Tano Petroleum Agreement from Hess Ghana Exploration Limited, and Hess Ghana Exploration Limited was later re-named Aker Energy Ghana Limited.

Subsequently, Aker argued that the Petroleum Agreement had to be varied. Aker argued that there had been material changes in the circumstances that prevailed at the time the petroleum agreement was executed, which hindered compliance.

Aker argued specifically that these material changes were occasioned by the introduction of new laws and regulations, and changes in the interpretation and implementation of laws applicable in the industry. Secondly, it was argued that further material changes had resulted from the effect on the petroleum operations of the provisional measures issued by the International Tribunal for the Law of the Sea (ITLOS).

Thirdly, it was argued that there was a need for a re-evaluation of concepts and changes in the Operator's organization, following the takeover of Hess by Aker Energy.[165]

On these grounds, Aker invoked Article 26.3 of the Petroleum Agreement, the Economic Equilibrium Stabilization Clause, which provides the framework for the re-negotiation of the terms of the Agreement in specified circumstances.

An issue arose regarding the possibility of the proposed amendments to the Agreement in light of Section 13 of the ***Petroleum Act*** of 1984. Section 13, titled, ***Review of Terms and Conditions,*** states that, "A petroleum agreement shall provide for a review of its terms where a significant change occurs in the circumstances prevailing at the time of the entry into the agreement or the last review of the agreement." The question which arises is whether the reasons proffered for 'opening up' the Agreement indeed and in fact, qualify as "significant changes" which affect the economic balance of the agreement?

Article 26.3 of the Petroleum Agreement specifies what will constitute "significant change in the circumstances" and notes that it should "affect the economic balance of the agreement."

163 An earlier version of this Article was published in the University of Ghana Law Journal (UGLJ), 2020, Volume XXX 2017-2019.
164 Article 23(1) – Term and Termination.
165 2.6 – Joint Memorandum to Parliament by John Peter Amewu (Minister for Energy) and Ken Ofori-Atta (Minister for Finance) on amendments to the Petroleum Agreement as amended among the Government of the Republic of Ghana, Ghana National Petroleum Corporation and Aker Energy Ghana Limited (Formerly Amerada Hess Ghana Limited) in respect of Deepwater Tano/Cape Three Points Contract Area Offshore Republic of Ghana.

Pursuant to a Sales and Purchase Agreement dated 16th February 2018, Aker acquired all the shares in Hess (Ghana) Limited, and became the sole owner of Hess Ghana Exploration Limited.

Further, the onus is on the party claiming the material change to "notify the other parties in writing of the claimed change with a statement of how the claimed change has affected the relations between the Parties." The question that arises is whether Aker has effectively demonstrated that the economic balance of the Agreement has been negatively impacted.

As noted by the Public Interest and Accountability Committee (PIAC), a statutory Committee with oversight over the management and use of petroleum revenue by the government:

Much as government may have good reasons for renegotiating some of the existing contracts, care must be taken not to give the signal to companies that they can agree to terms when they are entering into a petroleum agreement, only to turn around to ask for a re-negotiation.[166]

It is also to be noted that Aker relied substantially on the Freezing Stabilization Clause contained in the Agreement. Thus, though the Petroleum (Exploration and Production) Act, 1984 (PNDCL 84) has been repealed by the Petroleum (Exploration and Production) Act, 2016 (Act 919), Aker, by virtue of the freezing stabilization clause, is entitled to continue to adhere to the provisions of the ***Petroleum Act,*** 1984.[167]

It bears noting that International Oil Companies tend to, and often succeed in taking advantage of favourable fiscal and other terms which come into force after the agreement has been entered into, relying on the Nationality and Most Favoured Nation principles to make their case.

On 26th July 2018, the Petroleum (Exploration and Production) (General) Regulations, 2018 came into force. On 21st November 2019, the Petroleum (Exploration and Production) (General) (Amendment) Regulations, 2019 (L.I. 2390) was gazetted and entered into force on 23rd December 2019, amending provisions in the Petroleum (General) Regulations.

On the day of entry into force, Aker's amended Petroleum Agreement, which relied on amendments in these Regulations, was approved by Parliament.

4.6.2 Justifying the Amendments

On 16th December 2019, a Joint Memorandum was sent to Parliament by John Peter Amewu and Ken Ofori-Atta, Ministers for Energy and Finance, respectively, requesting amendments to the petroleum agreement as amended between the Government of Ghana, GNPC, and Aker Energy Ghana Limited (formerly Amerada Hess), in respect of Deepwater Tano Cape Three Points Contract Area, dated 8th February 2006.

Government argued that the amendments were justified on two main grounds[168] The first was "***the need to restore the Contractor to economic balance due to change in circumstances,"***[169] based on the argument that new laws and regulations had affected the economic balance of the Agreement. Specifically, it was noted that the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204) came into force on 5th July 2013, well after the effective date of the Agreement, which was, 19th July 2006.

The Ministers explained that the procurement process established in L.I. 2204 would work to Aker's detriment as the petroleum agreement did not provide for long and expensive bidding processes and did not require supplier contractors to incorporate Joint Ventures. The argument was advanced that these new processes would introduce additional costs and avoidable delays in contracting and ***"extremely cumbersome approval processes, which circumstances were not contemplated by the PA."***[170]

The second justification for the variation of the Agreement was "the need to accelerate exploratory activities in line with the Government's aggressive exploration strategy", [171] with the view to increasing crude production. It was further noted that the Government was encouraging companies to adopt this new strategy due to the benefits that would accrue to the State. [172]

166 Public Interest and Accountability Committee, 2019 Annual Report, 102.
167 Article 26.2.
168 Joint Memorandum (n 3) par 5.1.
169 Ibid, par 5.
170 Ibid par 5.1.1 – Local Content Requirements.
171 Ibid par 5 – Justification of Amendments to the Petroleum Agreement.
172 Ibid.

In this regard, it was proposed that the amendments to the Petroleum Agreement include a new definition of a ***"Development and Production Area"*** and the new provision should allow for exploratory activity in a Development and Production Area. [173]

Flowing from the justifications proffered for amending the petroleum agreement, and relying on Article 26.3 and to some extent, on the Regulations made under the Petroleum Act of 2016, a number of variations/amendments, dated 16th December 2019, were made to the Agreement between the State, [174] GNPC,[175]

Aker Energy Ghana Limited,[176] and Lukoil Overseas and Fueltrade Limited. [177] The amendments made were in respect of Article 1 (Definitions); Article 7 (Rights and Obligations of Contractor and GNPC); Article 8 (Commerciality); Article 12 (Taxation and other Imposts); Article 20 (Purchasing and Procurement); Article 23 (Term and Termination); and Article 25 (Assignment).

This article conducts a critical review and assessment of the justifications offered for the variations made to the Petroleum Agreement and comments on the extent to which the amendments made conform to or deviate from the legal frameworks and policy objectives of the petroleum industry in Ghana.

4.6.3 The Amendments

4.6.3.1 Amended Definitions

A number of amendments were made to the definitions contained in the Petroleum Agreement. In the Joint Memorandum to Parliament by the Ministers for Energy and Finance, these amendments were said to have been made to put the provisions ***"in the right perspective".*** [178]

Article 1.15 of the Agreement defines 'Contractor' as ***"Amerada Hess Ghana Limited and its respective successors and assignees".***

This has been amended to ***"Aker Energy Ghana Limited and its permitted successors and assigns; (b) Lukoil Overseas Ghana Tano Limited and its permitted successor and assigns; (c) Fueltrade Limited and its permitted successor and assigns, individually as the context may require."*** [179]

The Joint Memorandum to Parliament notes that the amendments made to the definitions were intended to reflect the "organizational changes effected by the Lukoil and Fueltrade farm-in agreements in 2014 and 2015, and the acquisition of one hundred percent (100%) of the shares in Hess by Aker Energy Ghana AS in 2018." [180]

Obviously, this amendment was necessary to reflect the change in the parties to the original petroleum agreement. On 21st March 2014, Hess entered into a farm-in agreement with Lukoil Overseas Ghana Tano Limited (Lukoil), which was approved by the Minister for Energy on 13th November 2014, and by GNPC on 26th November 2014.

Fueltrade Limited also acquired a participating interest in the Field from Lukoil, pursuant to a farm-in agreement dated 7th May 2015.

173 Ibid.
174 This was signed by the Minister for Energy and witnessed by Lawrence Apaalse, Chief Director .
175 This was signed by its Chief Executive Officer, Dr. Kofi Koduah Sarpong and witnessed by Florence Addobea Osew, Executive Assistant to the CEO.
176 This was signed by its General Manager and witnessed by its Finance Manager.
177 This was signed by its Executive Chairman and witnessed by its Legal Officer.
178 3.2 – Terms of the Petroleum Agreement.
179 Article 1.15.180 Article 1.15.
180 Joint Memorandum (n 3) par 3.2.

Government argued that the amendments were justified on two main grounds. The first was "the need to restore the Contractor to economic balance due to change in circumstances," based on the argument that new laws and regulations had affected the economic balance of the Agreement. Specifically, it was noted that the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204) came into force on 5th July 2013, well after the effective date of the Agreement, which was, 19th July 2006.

(i) Article 1.22 of the Petroleum Agreement defined "Development and Production Area" as:

> *that portion of the Contract Area reasonably determined by Contractor (or by GNPC if a sole risk pursuant to Article 9) on the basis of the available seismic and well data to cover the areal extent of an accumulation or accumulations of petroleum constituting (collectively, if applicable) a Commercial discovery, enlarged in area by ten percent (10%), such enlargement to extend uniformly around the perimeter of such accumulation and to be further enlarged from time to time by the area covering any extension of the accumulation(s) which is revealed by further petroleum operations.*

The Joint Memorandum states that, the amendment to the petroleum agreement *"updates the meanings of a 'Development and Production area'"* to *"align with current legislation…"*[181]

Under the Petroleum (Exploration and Production) (General) Regulations, 2018, "Development and Production Area" was defined as:

> *that portion of the contract area under an approved plan of development and operation on the basis of the available seismic and well data to cover the areal extent of an accumulation or accumulations of petroleum constituting a commercial discovery as well as extending beyond the perimeter of the accumulation with additional area not exceeding ten percent of the areal extent of the accumulation, as approved by the Commission.*

This definition has been amended under the Petroleum (Exploration and Production) (General)(Amendment) Regulations, 2019 (L.I. 2390) to read as:

> *Development and Production Area' means that portion of the Contract area under an approved Development Plan on the basis of the available seismic and well data to cover the areal extent of accumulation or accumulations of petroleum constituting commercial discovery as well as extending beyond the perimeter of the accumulation(s) with additional areas as approved by the Commission.*[182]

Thus, the latter part of the earlier definition contained in the General Regulations which reads as "with additional area not exceeding ten percent…" is amended under the General (Amendment) Regulations to read as, "with additional areas as approved by the Commission".

181 Ibid .
182 Regulation 13 of the Petroleum (Exploration and Production) (General) (Amendment) Regulations, 2019 (L.I. 2390) amending Regulation 80 of the Petroleum (Exploration and Production)(General) Regulations, 2018 (L.I. 2359).

In effect, the limitation that the area additional to the commercial discovery must not exceed 10% has been removed. The practical effect is that there is no limit to the size of the Development & Production area.

This affects the relinquishment provisions in that some marginal discoveries within the wider block which may not be necessarily connected geologically to the other and otherwise would have been relinquished under the previous law can now be classified as part of the D & P area and retained by the contractor.[183]

Typically, such relinquished areas could have otherwise been given out under a different Petroleum Agreement for these marginal discoveries to be developed.

The rationale as explained by government officials is that these prospects on their own may not be profitable to develop. So, the argument advanced in support of this amendment is that, the onus is put on the IOC to come out with a work programme, thereafter work on these areas, and tie-in to the existing structures.

Thus, the areas will be left to the IOC so long as they have prospects, after which a work programme will be developed, and a tie-in undertaken. The reasoning is that, if these prospects are given to another company, there will not be as efficient a development as there would be if there was a tie-in.

(ii) Regulation 5(1) of the Petroleum (Exploration and Production) (General)(Amendment) Regulations, 2019 (L.I. 2390), is titled, *"Application for Extension or Conduct of Exploration Activity within a Development and Production Area"*, and amends Regulation 29 of the General Regulations to read:

> *The Commission may, in approving a development and production area after careful technical considerations, determine that, where there is an existing prospect or accumulation outlying a commercial discovery, which is considered marginal and cannot be developed on a stand-alone basis, the prospect or accumulation shall be made part of the development and production area.*

It is also noted in the Memorandum under the heading *"Government's Aggressive Exploration Strategy"*[184] that:

> *The Government has accordingly submitted to Parliament, proposed amendments to the General Petroleum Regulations (L.I. 2359) to allow Contractors to undertake exploration activities within a Development and Production Area for companies that present good work programmes to explore for resources that would otherwise be stranded...* [185]
>
> *Therefore, the amendments in the Petroleum Agreement adopt a new definition of a 'Development and Production Area' and the provision to allow for exploratory activity in a Development and Production Area.*[186]

183 As GNPC noted in a letter to the Minister for Energy, "From a technical standpoint, GNPC has determined that the TU1 Pecan main (discovery field) and the TU2 Pecan South and Pecan South East (prospects) are not connected, i.e., the Pecan Main and the Pecan South East fairways are 2 separate systems of different stratigraphic ages."
184 Joint Memorandum (n 3) par 5.2 – Government's Aggressive Exploration Strategy
185 Ibid
186 Ibid

In effect, the limitation that the area additional to the commercial discovery must not exceed 10% has been removed. The practical effect is that there is no limit to the size of the Development & Production area. This affects the relinquishment provisions in that some marginal discoveries within the wider block which may not be necessarily connected geologically to the other and otherwise would have been relinquished under the previous law can now be classified as part of the D & P area and retained by the contractor.

It bears noting, however, that a new Article 7.9 is inserted as follows:

> *"In the Minister's approval of the Development Plan, the delineation of the Development and Production Area shall be in accordance with Contractor's proposal in the submitted Development Plan.*
> *For the avoidance of doubt, the area retained shall be consolidated for tax purposes as permitted under the Petroleum Income Tax Act, 1987."*

This means that, it is Aker, and not the Petroleum Commission that makes the determination as to the extent of the Development and Production Area. Originally, after appraisal of the discovery, there was a 10% allowance permitted beyond the delineated area, and that became the Contractor's development and production area.
Aker has now re-defined Development and Production area (DPA) to be essentially what it determines it to be. Further, the second part of the provision, relying on the Petroleum Income Tax Act, 1987 (PNDCL 188),[187] stipulates that the area retained is consolidated for tax purposes.

The effect of this amendment is that the costs arising from one area can be charged against the discovery, thus reducing the tax liability of the Contractor to the state. The current position is encapsulated in the amendment to Section 29 of the Petroleum (Exploration and Production) (General) Regulations, which is amended to read in Regulation 29(4) (b) that: ***"The cost of the exploration activities shall be ring-fenced and recovered from the revenues that would accrue to the development and production of the prospect or accumulation".*** It further emphasizes in Regulation 29(5) that, "Cost emanating from the prospect shall not be charged to the existing commercial discovery or discoveries within the development and production area."

In effect, by the insertion of Article 7.9 in the Petroleum Agreement, the different areas are treated as one consolidated whole and the costs arising from one area can be applied to an existing discovery, thus reducing Aker's declared profits and correspondingly, the amount of tax to be paid. This arrangement allows Aker to approbate and reprobate. To 'approbate and reprobate' is ***"to blow hot and cold; a person is not allowed to take a benefit under an instrument and disclaim the liabilities imposed by the same instrument."***[188]

In effect, the amendment enables Aker to cherry-pick, that is, claim the benefit of favourable provisions under new laws while disclaiming aspects it deems unfavourable, as opposed to taking the instrument as a whole.

(iii) Regarding the "Exploration Period," the Petroleum Agreement defined it thus:

> *"'Exploration period' means the period commencing on the Effective Date and continuing during the time provided for in Article 3.1 within which Contractor is authorized to carry out Exploration Operations and shall include any periods of extensions provided for in this Agreement. The period shall terminate with respect to any Discovery Area on the Date of Commercial Discovery in respect of such Discovery Area".*[189]

This has been amended to read:

> *"'Exploration Period' means the period commencing on the Effective Date and continuing during the time within which Contractor is authorized to carry out Exploration Operations".*

The effect is that, an exploration period can go beyond the date of commercial discovery. There is no definite timeline for ending exploration and the Contractor can carry out exploration activities for an indefinite period of time, whereas under the old arrangement, exploration was to cease following a commercial discovery in line with the ***"government's aggressive exploration strategy."***[190] Thus, Aker can develop the block at its own pace and not at the pace required by the state.

This amendment to the Petroleum Agreement creates a situation where Aker, upon making a discovery, is allowed to explore beyond the statutory seven-year period, with extensions, where necessary.

187 Though the Petroleum Income Tax Act, 1987 (PNDCL 188) has been repealed, it is relied upon simply because the Agreement contains a freezing stabilization clause, so it still governs the agreement.
188 Leslie Rutherford and Sheila Bone (ed), Osborn's Concise Law Dictionary, (8th edn, Sweet and Maxwell 1993) 29.
189 Article 1.30 - Definitions.
190 Joint Memorandum (n 3) par 5.2.

The issue of cost arises. When the IOC is taking a risk, it does not know whether it will make a discovery or not, so it holds itself to a more stringent standard as to whether to drill a first or second well. However, if the State allows exploration beyond the exploration period, thus permitting Aker to incur more costs and offset it against production from the original discovery, there will be less profit to tax, and government gets less revenue as Corporate Income Tax is levied on profit.

In the current arrangement pertaining to these variations, there is no certainty as to tax revenue. Further, since it is the State that is taking the risk at this point, it begs to be asked why the IOC should enjoy the same returns without assuming any part of the risk. Clearly, the terms of the further exploration beyond the stipulated deadline should not be the same.

The definition of 'Operator' has also been amended. The original clause reads: "Operator" means "Amerada Hess Ghana Limited or such other Party as may be appointed by Contractor with the approval of GNPC and the State, which approval shall not be unreasonably withheld." The amended clause reads: "'Operator'" means Aker Energy Ghana Limited, or such other Party as may be appointed by Contractor with the approval of the Minister, whose approval shall not be unreasonably withheld."

Whilst the Joint Memorandum noted that this amendment was made "to reflect the current Operator,"[191] beyond that, the amendment takes away the requirement of approval by GNPC, which is understandable, considering that the quasi-regulatory powers of GNPC are to be devolved from the entity. At the time of signing of the Agreement, GNPC was a quasi-regulator because it was vetting companies coming in. However, even if GNPC's approval is excluded, it begs asking why it has not been replaced with the Petroleum Commission, which is now the mandated regulator of the industry.

Aker argues, based on the freezing stabilization clause, that the Petroleum Commission, being a new entity, cannot be mandated to give approval. Since Aker has been receiving permits and approvals from the Petroleum Commission, once again, it appears to be approbating and reprobating.

4.6.3.2 Rights and obligations of contractor and GNPC - Article 7

In respect of Article 7 of the Petroleum Agreement titled, Rights and Obligations of Contractor and GNPC, a new Article 7.8 is inserted which puts an obligation on the Minister to ***"…provide all reasonable assistance to Contractor to enable Contractor to carry out its obligations as expeditiously and efficiently as possible, including (without limitation) by ensuring that all licenses, consents, permits and/or authorizations***[192] ***required in relation to Contractor's Exploration Operations and Petroleum Operations are granted promptly and on reasonable terms and conditions…"***

The Joint Memorandum gives the rationale for this insertion as being "to reduce costs due to delays in obtaining such licenses, consents and/or authorizations" required in relation to Contractor's Operations and to ensure that they ***"are granted promptly and on reasonable terms and conditions."***[193]

First of all, it is unclear why Aker should be accorded such treatment different from the other companies operating within the jurisdiction, and further it is not clear what constitutes granting consents, permits and the like on ***"reasonable terms and conditions."***

This provision also raises potential conflict of interest issues since the Minister, who, in practice, exercises some regulatory powers, is being required to act at the same time on behalf of the IOC, with a stipulated timeline of 30 days being imposed on him. It further raises questions of whether the Minister's authority can be compromised.

191 Ibid., par 3.2.
192 Ibid par 3.3.
193 Article 7.8.

This means that, it is Aker, and not the Petroleum Commission that makes the determination as to the extent of the Development and Production Area. Originally, after appraisal of the discovery, there was a 10% allowance permitted beyond the delineated area, and that became the Contractor's development and production area.
Aker has now re-defined Development and Production area (DPA) to be essentially what it determines it to be.

The petroleum agreement, under Rights and Obligations of Contractor and GNPC[194] tasks GNPC with duties of facilitation. It takes one aback when the highest levers of authority within the upstream petroleum industry are tasked with facilitation duties on behalf of the IOCs. This creates a situation where the State could be held liable for a breach of the Agreement.

4.6.3.3 Commerciality - Article 8

(i) Article 8 of the Petroleum Agreement, titled Commerciality is also amended with the insertion of sub-paragraph(k) to read:

> *8.11(K) …An obligation to provide security to secure the fulfilment of the obligations undertaken by Contractor and the discharge of Contractor's liabilities arising out of the operations approved under such Development Plan… shall be deemed satisfied by a parent company guarantee issued by Aker Energy AS, or its successors.*

Explaining the rationale for this provision, the Joint Memorandum indicates that, it ***"provides clarification that AEGL's [Aker Energy Ghana Limited's] obligations related to such security as a Contractor Party will be fulfilled by a parent company guarantee provided by its parent company, Aker Energy AS, or its successors."***[195]
There is, essentially, no problem with a parent company guarantee so long as it meets the specified threshold.

If a company with financial capacity, such as Exxon-Mobil's parent company provides or issues a guarantee, that is acceptable. If ExxonMobil guarantees the performance of its subsidiary, the State need not require a bank guarantee or performance bond. Accordingly, the State took a second look and proposed an amendment through the Petroleum (Exploration and Production) (General) (Amendment) Regulations, 2019 (L.I. 2390) by the insertion of Regulation 78(A) titled, General Requirement on the issue of Petroleum Bond or Guarantee, to take into account this reality.

The requirement was expanded and made more flexible such that an IOC could use more instruments as security, subject to the Minister's oversight. Therefore, the litmus test as to whether this provision is acceptable is whether the parent company of Aker has the financial wherewithal to provide this guarantee.

(ii)Further, a new Article 8.16A is inserted to read as follows:

> *Contractor shall have the right to amend, vary or adjust the Development Plan within twelve months of the final investment decision by Contractor without the consent of the Minister, provided that such amendment, variation or adjustment shall not result in an increase in total capital expenditure in respect of the Pecan Field. Contractor shall promptly notify the Minister in writing of such amendment, variation or adjustment.*

The language of this provision is ambiguous. In any case, the consent of the Minister to amendments to a development plan should be a pre-requisite. This amendment is justified in the Joint Memorandum as being necessary ***"to grant the Contractor the right to amend the Development Plan to accommodate changes in the underlying assumptions and pre-conditions upon which the Development plan was approved."***[196]

The provision stipulates that there can be an amendment of the development plan without the consent of the Minister provided that there is no increase in total expenditure. What is the justification for providing such a right to the Contractor? What this means, by way of illustration is that, after obtaining the approval of the Development Plan for instance, the Contractor could vary the drilling of four injection wells, to two.

194 Article 7 of the Model Petroleum Agreement of 2000; Article 8 of the Modified/ Updated Modified Model Petroleum Agreement of 2019.
195 Joint Memorandum (n 3) par 3.4.
196 Ibid.

It takes one aback when the highest levers of authority within the upstream petroleum industry are tasked with facilitation duties on behalf of the IOCs. This creates a situation where the State could be held liable for a breach of the Agreement.

While such a variation may not cause an increase in total expenditure, it could have an impact on the long-term sustainability of the Field; should the government not have a say?

The Development Plan is the State's trump card and the moment it loses control of it, the state loses control of its development and production. The IOC can, for instance, drill more production wells and less injection wells and this could cause irreparable damage to the reservoir. Certainly, an amendment to the Plan should require the approval of the Minister. Development plans are critical because this is where the government controls the extraction of the oil.

(iii) Further, a new Article 8.20 is inserted as follows:

> *Notwithstanding the expiration of the Exploration Period under Article 3 and the completion of Contractor work obligations under Article 4, following the approval of a Development Plan by the Minister, Contractor shall have the right to perform additional Exploration Operations within the Development and Production Area in accordance with applicable law.*

The implication is that the Exploration Period does not end at determination of commerciality as is the norm, but can continue after development. As noted in the Joint Memorandum to Parliament, it "clarifies the Contractor's right to contract further exploration within the Development and Production Area following Parliament's passing of the amendments to L.I. 2359."[197]

4.9.3.4 Taxation and other Imposts - Article 12

(i) In respect of Article 12, there has been the insertion of Sub-Paragraph G under Article 12.2 as follows:

> *Contractor, its Sub-contractors and Aker Ghana Companies shall not be subject to any payment of VAT, NHIL, GETFund Levy or similar imposts on works, services, plant, equipment or materials supplied in Ghana to be used solely and exclusively in the conduct of Petroleum Operations, unless specifically provided for under this Article 12.*

The Joint Memorandum notes that this amendment is to "further clarify rights already existing in the PA with respect to Import duties, Import VAT, NHIL, GETFL, ECOWAS Levy, EXIM Levy, Special Import Levy, and other similar taxes..."[198]

The rationale for this exemption as proffered by the Ministers is that, these taxes introduced after the signing of the petroleum agreement significantly vary the circumstances that prevailed at the time that the Agreement was entered into and as such, Aker, its sub-contractors, and Aker companies, must be exempted.

For purposes of this Article, the term ***"Aker Ghana Companies",*** is defined to include all the companies under the Aker umbrella operating in Ghana. As such, it means, ***"Aker Energy AS, Aker Energy Ghana AS, TRG Energy AS, AGM Petroleum Ghana Ltd., Aker Ghana Investment Company AS, Aker Ghana Investment Company Limited and their successors."***[199]

As such, all these companies under the 'Aker umbrella' enjoy this exemption.

197 Ibid.
198 Ibid., par 3.5.
199 Par 4.1 of the Amendment to the Petroleum Agreement, dated 8th February 2006.

The Development Plan is the State's trump card and the moment it loses control of it, the state loses control of its development and production.
Certainly, an amendment to the Plan should require the approval of the Minister.
Development plans are critical because this is where the government controls the extraction of the oil.

(ii) An insertion at the end of Article 12.3 reads thus:

> *The rate of withholding tax for any payment made by any Subcontractor to any sub-subcontractor in connection with this Petroleum Agreement shall, if and when such withholding is required by applicable law, be 5% in respect of the supply of goods, works, or services; and the tax withheld shall be a final tax in the case of non-resident sub-subcontractors and they shall have no further tax obligation in Ghana on that income.*
>
> *The rate of withholding tax between Sub-contractors and sub-sub-contractors provided in the above paragraph shall be applicable for a period of seven (7) years till December 2026. The parties may negotiate for a further term if the tax legislation has not been fully reviewed to fully reflect the rate and nature of the above per the expiry of the period.*

This amendment modifies Article 12 to further clarify rights already existing in the PA with respect to the treatment of withholding taxes on payments made by Subcontractors.[200] Additionally, a new sentence is inserted at the end of Article 12.5 to the effect that Contractors and Sub-contractors shall not be subject to any payment of Import Duties, Import VAT, NHIL, GETFund Levy, AU Levy, ECOWAS Levy, EXIM Levy, Special Import Levy or any other taxes, duties, or levies on the import of all plant, equipment, materials or services to be used solely and exclusively in the conduct of Petroleum Operations.

In the first place, why levy impost on such investment? This might not be wise. For example, if the Contractor brings in an FPSO, will it be required to pay VAT and import duties? Even if 1% of the cost of the FPSO is charged, it will be lumped to the cost of the lease of the FPSO. So, should the state impose these imposts, it will take money upfront, but this will affect the revenue going forward as it will be recovered through capital allowance.

In respect of the rate of withholding tax, for companies that are sub-contractors, especially those not resident in Ghana, such as seismic companies, the amendment may not raise any issues. However, what is the threshold? If the State were taxing, it would be taxing not the value of the contract, but the profit.

This discrepancy or disparity accounts for the protests within the industry that the withholding tax of 15% is too high. If a company executes a project worth 30 million dollars and its profit is 2 million dollars, it will have to pay withholding tax of 15% of 30 million dollars. If it does a job that costs 30 million dollars and its profit is 2 million dollars, its entire tax liability to the State is 25% (general tax rate for listed companies) of the 2 million dollars, while the withholding tax would be 15% of 30 million. The comparison between 15% of 30 million (4.5 million) and 25% of 2 million dollars, which is 500,000 dollars, explains the resistance of the entire industry to this arrangement.

4.6.3.5 Purchasing and Procurement - Article 20

(i) Articles 20.3 to 20.7 are inserted in Article 20 of the Petroleum Agreement, titled Purchasing and Procurement. Article 20.3 is inserted to read as follows:

> *Procurement of goods, works or services for Petroleum Operations shall be within the work and budgets approved by the JMC. The selection of suppliers and award of contracts by Contractor within an approved work programme and budget shall not be subject to approval by the JMC or governmental authorities.*

200 Par 4.2 of the Amendment to the Petroleum Agreement, dated 8th February 2006.

In respect of the rate of withholding tax, for companies that are sub-contractors, especially those not resident in Ghana, such as seismic companies, the amendment may not raise any issues. However, what is the threshold? If the State were taxing, it would be taxing not the value of the contract, but the profit.

The provision stipulates that, so long as the procurement of goods, works or services are within an approved work programme and budget approved by the Joint Management Committee (JMC), the selection of suppliers and award of Contracts shall not be subject to approval by either the JMC (of which the State represented by GNPC is a member) or government authorities.

In effect, to analogize, it states that, so long as the blueprint is approved, neither GNPC nor the State is entitled to make any input in terms of the details. Once the procurement is within the approved budget and work programme, where supplies are procured, the details of the selection of suppliers and award of contracts lie within the domain of Aker and requires no approval from GNPC nor the State.

(ii) Article 20.4 is inserted to read as follows:

> *Contractor shall establish a transparent procurement process ("Procurement Process"), whereby the JMC, the Petroleum Commission and the Minister are kept informed about the selection of suppliers and award of contracts.*

Flowing from Article 20.3, which excludes the participation or approval of the State and GNPC in the selection of suppliers and award of contracts by the Contractor, and in an apparent attempt to assuage fears that the IOC has been given a blank cheque to do as it pleases, Article 20.4 is inserted to provide 'cold comfort' or create the appearance of forestalling any impropriety. At the minimum, one would expect the Petroleum Commission to be involved in vetting the ***"transparent procurement process".***

Articles 20.5(a) and (b) are also inserted to amend Article 20. Article 20.5(a) stipulates that, if the scope of work consists of works, goods and services originating in Ghana, it will be awarded to a locally incorporated JV company. The key thing to note here is that it is Aker – and not the Petroleum Commission – that makes the determination as to whether the scope of work consists of goods, works and services originating in Ghana.

Under Article 20.5(b), it stipulates that where the scope of work consists of goods, works or services not originating in Ghana, it will be awarded to a foreign legal entity. Again, the determination of whether the scope of works consists of goods, works or services not originating in Ghana, is made by Aker and not the Commission.

Thus, as noted in the Joint Memorandum, the effect of the two provisions is that the Contractor has "the right to apply a split-contract model whereby in-country scope will be contracted with a local JV company and out-of country scope contracted directly with foreign legal entity, where appropriate and award contracts for petroleum operations **without any further restrictions and or approvals**"[201] [Emphasis Mine].

Thus, as noted in the Joint Memorandum, the effect of the two provisions is that, the Contractor has ***"the right to apply a split-contract model whereby in-country scope will be contracted with a local JV company, and out-of country scope contracted directly with foreign legal entity, where appropriate and award contracts for petroleum operations* without any further restrictions and or approvals".**[202] [Emphasis Mine].

However, it bears noting that the way the State has practicalized some of these local content provisions and further, the way governments have allegedly interfered with the procurement processes in the past, may have contributed to the insistence on the inclusion of such 'aggressive' provisions.

(iii) Article 20.6 is inserted, and reads:

> *Pursuant to Article 26.2, the obligation of a Contractor or Sub-contractor to make contributions to the local content fund established under Act 919, does not apply to Contractor, its Sub-contractors and suppliers for goods, works or services, to be used solely and exclusively in the conduct of Petroleum Operations."*

201 Joint Memorandum (n 3) par 3.6
202 Ibid

Section 66(1)(a) of the Petroleum Act, 2016 titled Sources of Money for the Fund states, ***"The sources of the Fund include contributions from a Contractor as agreed in a petroleum agreement.*** [Emphasis Mine]." Since there is no such provision in the Agreement, it could be argued that Aker is indeed exempt.

However, under Section 66(1)(b), another source of money for the Fund is *"contributions from a sub-contractor of the sum of one percent of the total consideration payable by the Contractor or licensee for every contract."*
Therefore, under Section 66(1)(b), Aker would, otherwise, be liable to make this payment, hence its invocation of the stabilization clause.

In a letter seeking the opinion of the effect of stabilization clauses on existing petroleum agreements from the Attorney General, the Chief Director at the Ministry of Energy commented:

> *In the recent past, some Contractors who are a party to existing petroleum agreements executed before 2013, have raised concern on the application of recently passed petroleum legislation on their operations under their respective petroleum agreements. The common thread running through these concerns, is that their petroleum agreements contain stabilization clauses which in their opinion insulate them from the operation of laws passed after the effectiveness of their petroleum agreements… These Contractors have indeed sought the intervention of the Minister, particularly in cases where regulatory agencies or other government entities have by operation of newly passed legislation imposed new obligations. These including among others, the imposition of new fees and charges that were hitherto not applicable to them.*[203]

The Public Interest and Accountability Committee also notes in respect of the one percent deduction that some contractors make reference to their stabilization clauses as a basis for non-compliance.[204]

(iv) Article 20.7 is inserted to state as follows:

> *Sub-contractors shall have the same rights as Contractor specified in Article 20 to select and award contracts, and may use out-of-country scope (with foreign legal entities), and shall keep the Petroleum Commission and the Minister* ***informed*** *about the selection of suppliers and award of contracts [Emphasis Mine].*

In effect, the rights claimed by Aker in the aforementioned provisions are extended to its sub-contractors.

4.6.3.6 Term and Termination - Article 23

(i) Article 23 of the petroleum agreement, titled, Term and Termination, is amended as follows with the insertion of Article 23.1A:

> *Subject to this Article, the term of this Agreement shall be thirty-four (34) years commencing from the Effective Date on the understanding that the Petroleum Agreement is extended by an additional four (4) years to restore time lost to Contractor following the postponement of petroleum operations.*

203 Letter dated 3rd October 2018 from Lawrence Apaalse, Chief Director, Ministry of Energy, to the Attorney General and Minister of Justice, Gloria Afua Akuffo, and titled, "Effect of Stabilization Provisions in Existing Petroleum Agreements on Recent Legislation," 1.
204 Public Interest and Accountability Committee (n 4) 9.

The Public Interest and Accountability Committee also notes in respect of the one percent deduction that some contractors make reference to their stabilization clauses as a basis for non-compliance.

(ii) In the general comments in the Memorandum providing the background to the Agreement, the Ministers for Energy and Finance noted that:

> *The Ministry [of Energy] acknowledges the adverse effects on the Contractor's petroleum operations caused by the provisional measures issued by the International Tribunal of the Law of the Sea (ITLOS) as a consequence of the maritime dispute between the Republic of Ghana and the Republic of Cote d'Ivoire regarding the maritime boundary between the two countries.*[205]

It was the determination of the Petroleum Commission that the maritime boundary dispute between Ghana and Cote d'Ivoire before the International Tribunal of the Law of the Sea (ITLOS) took two years. As such, the IOCs were granted an extension of 2 years plus an additional year for mobilization, making 3 years in total. It is unclear why the Contractor has been granted 4 years.

(iii) Further, Article 23.1 is amended with the insertion of Article 23.1B which states:

> *Contractor may, at any time following the Date of Commencement of Commercial Production, notify the Minister and GNPC in writing of the production profile for the Contract and request the term of this Agreement be extended by an additional period consistent with the production profile. Upon receipt of the notice from Contractor, the Minister, shall, on the same terms, extend the term of this Agreement by the period consistent with the production profile and as requested in such notice.*

The term of a petroleum agreement must be certain. Secondly, Aker can basically request that the State extends the petroleum agreement at will, when it determines what the production profile is. The extension, and the period thereof, will be for such time as requested by the Contractor. As such, in effect, Aker can request an extension of the petroleum agreement until such time as it has exhausted the Field.

The Petroleum Act of 1984, in Section 12, titled Period of Validity of Petroleum Agreement, states that, "A petroleum agreement entered in under this Law shall be valid for a total period not exceeding thirty years…"[206] This amendment literally grants to Aker the right to dictate the term of the petroleum agreement contrary to the law, both under the repealed Petroleum Act of 1984, which Aker shelters under, and the current law, the Petroleum Act of 2016.

4.6.3.7 Assignment - Article 25

(i) Article 25 of the Petroleum Agreement is titled Assignment. Article 25.1 is replaced with a new Article 25.1, which reads:

> *This Agreement shall not be assigned by Contractor directly or indirectly in whole or part, without the prior written consent of GNPC and the Minister, which consent shall not be unreasonably withheld or delayed, and will only be required upon a change of control in the relevant Contractor Party.*

This is contrary to the law as stated in Section 8[207] of the Petroleum Act of 1984 and the Joint Memorandum does

205 Joint Memorandum (n 3) par 2.6.
206 Even under the current law, the Petroleum Act of 2016, though the duration has been reduced to 25 years, the position has not changed in respect of the 'effect' of the provision. Section 14, titled Duration, states that, a petroleum agreement shall be for a period not exceeding 25 years. Where production from a Field is projected to extend beyond 25 years, the Minister may approve an extension of the Agreement on the same terms agreed by the parties or execute a new petroleum agreement by direct negotiations. This extension is subject to ratification by Parliament.
207 Section 8 – Non-Assignment of Petroleum Agreement.

It was the determination of the Petroleum Commission that the maritime boundary dispute between Ghana and Cote d'Ivoire before the International Tribunal of the Law of the Sea (ITLOS) took two years. As such, the IOCs were granted an extension of 2 years plus an additional year for mobilization, making 3 years in total. It is unclear why the Contractor has been granted 4 years.

not attempt to provide any justification or reasoning for this amendment. Section 8 of the Petroleum Act of 1984, titled Non-Assignment of Petroleum Agreement states that, ***"A petroleum agreement entered into under this Law shall not directly or indirectly be assigned, in whole or in part, by the holder of such agreement to another person without the prior consent in writing of the Secretary [Minister]."***

No exception is made with regard to a change of control in the relevant Contractor party. This is an attempt to have the petroleum agreement override the law. It is worthy of note that even under the Petroleum Act of 2016, the position of the law has not changed.

It states in Section 16 that, ***"A contractor or a licensee shall not without the written approval of the Minister, directly or indirectly assign the interest of the Contractor under a petroleum agreement, whether in whole or in part, to a third party or affiliate."*** It must be the case that an IOC needs the consent of the Minister so long as it is assigning its interest. The State has given the IOC the right to explore the resources.

The State has its criteria for assigning it to that particular IOC. According to this provision, the Contractor may assign its interest without reverting to the State which gave it the acreage in the first place, to determine whether the proposed assignee meets the criteria. The provision states that, unless there is a change in control of the Contractor, it does not need the approval of the Minister to assign its interest.

(ii) Under the Petroleum Act of 1984, if an IOC sells shares or if there is a change in its shareholding structure, it needs the Minister's approval. It notes under Section 23(16) that:

> *A contractor or sub-contractor shall not transfer any share or shares in its incorporated company in Ghana to a third party either directly or indirectly without the written approval of the Secretary if the effect of such transfer would be either to give such third-party control of such company or to enable such third party take over the interests of a shareholder who owns five per centum or more of the shares in such company.*

It appears this caveat - unless there is a change in control of the relevant Contractor party - was only included so as not to appear to be attempting to override Section 23(16), though it still does not deal with the fact that Section 8 of the Petroleum Act of 1984 prohibits assignment simpliciter, without the approval of the Minister. It is realised that under the Petroleum Act of 1984, the State exercises real control over the activities of the Contractor, while under this Petroleum Agreement, one sees a dismantling of the many controls that the State exercises over the IOC.

Further, a new Article 25.5 of the Petroleum Agreement is added. The Joint Memorandum does not attempt to provide any explanation or justification for this insertion but simply comments thus; "Article 7 of Amendment No. 1 modifies Article 25 of the PA (i.e., Assignment) by providing that any right GNPC may have of pre-emption to acquire the Contractor's interest shall not apply to any restructuring, transfer, transaction, sale, share issue, amalgamation, merger, demerger or other direct or indirect change of ownership or interest in the Agreement with respect to some specific transactions, including the direct or indirect change in underlying ownership of a Contractor Party." [208]
It bears noting that this provision starts with the phrase, ***"Notwithstanding any applicable law..."*** A petroleum agreement cannot override the provisions in a statute. It cannot be the case that this Agreement can override statutory provisions.

Section 18(1) of the Petroleum Act of 2016 titled Pre-Emption, states, "Where a Contractor enters into an agreement to dispose of all or part of the interest of that Contractor directly or indirectly under a petroleum agreement, the Corporation [GNPC] shall have a pre-emption right to acquire the interest on the same terms as agreed with the potential buyer."

208 Joint Memorandum (n 3) par 3.8.

Accordingly, though Aker argues that the provisions of the Petroleum Act of 2016 are inapplicable to it, nevertheless, it cannot be stipulated that, "Notwithstanding any applicable law… [Emphasis Mine]" as that would not only be an affront to the law, but unlawful.

(ii) Furthermore, a new Article 25.6 is inserted as follows:

> *In the event of an acquisition by GNPC of any participating interest of a Contractor Party in accordance with applicable law, the transfer or disposal of such participating interest by a Contractor Party shall only be effective once payment for such participating interest has been received by such Contractor Party, unless otherwise provided in any agreement between the GNPC and a Contractor Party.*
>
> *The Joint Memorandum notes that, "The Amendment also clarifies that in the event that GNPC acquires any participating interest of a Contractor Party in accordance with applicable law, the transfer/disposal shall only be effective once payment has been received by such Contractor Party."*[209]

This is most likely because of the situation that eventuated earlier in respect to Hess where GNPC requested in 2014 to take on additional interest of 10% through its subsidiary, Explorco. GNPC subsequently signed an Agreement for US$44 million in 2015 with Hess in respect of same. Parliament approved the sum of US$47 million to GNPC and same was released by the government in GNPC's annual programme of activities.

The boundary dispute between Ghana and Cote d'Ivoire before ITLOS caused the execution of the Assignment and Assumption Agreement to delay. GNPC was expected to effect payment for the 10% stake after September 2017, but failed to do so, forcing Hess to reclaim the 10% allocated to GNPC through Explorco, its subsidiary.

4.6.3.8 Miscellaneous

Under Miscellaneous, it is stated thus:

> *Except as expressly set forth herein, nothing in this Amendment shall constitute a modification or alteration of the terms, conditions or covenants of the Petroleum Agreement, or a waiver of any other terms or provisions thereof. The Petroleum Agreement shall remain unchanged and shall continue in full force and effect, in each case as amended hereby.*
>
> *For the avoidance of doubt, (i) this Amendment shall not be considered an alteration of the Petroleum Agreement for the purposes of the applicable law and Section 135(2) of the Income Tax Act, 2015 (Act 896), and the provisions of the Petroleum Agreement that modify the manner in which tax is imposed, including by reason of the fiscal stability clause, shall remain unchanged and shall continue in full force and effect, ii. The Petroleum Income Tax Act, 1987 (PNDCL 188) will continue to apply to the Petroleum Agreement, and (iii) Nothing in this amendment shall change the Effective Date as defined in the Petroleum Agreement.*

209 Ibid.

A petroleum agreement cannot override the provisions in a statute. It cannot be the case that this Agreement can override statutory provisions.

It further states:

> *"For the avoidance of doubt, Article 26 shall apply to the terms of this Amendment."*

Section 135(2) of the Income Tax Act, 2015 (Act 896) titled Agreements Affecting Tax is also ousted. Section 135(2) states: (2) "Where this subsection applies, the provisions of the old tax law that are modified or protected by the Agreement continue to apply until the earlier of (b) the first alteration of the Agreement after the commencement of this Act [Emphasis Mine]." In effect, Section 135 of the Income Tax Act stipulates that by the first alteration of the petroleum agreement, the stabilization clause falls away.

In other words, upon the first amendment of the petroleum agreement, the Income Tax Act of 2015 becomes applicable to the petroleum agreement. Therefore, in this provision, there is an acknowledgement of stabilization, so the new law does not apply to the IOC. The second leg lists circumstances that will cause the Income Tax Act of 2015 to apply, and one of these is the alteration of the petroleum agreement.

However, although by clearly making amendments to the petroleum agreement there have been alterations to portions of the Agreement, it is stipulated in the Amendment that it will not be classified as an "alteration" in order to allow Aker to continue to claim the benefit of the stabilization clause.

4.6.3.9 Review Remark

On 23rd December 2019, the Ghanaian Parliament passed a number of extensive amendments to the Petroleum Agreement dated 8th February, 2006 and entered into between the Government of Ghana, GNPC, and Amerada Hess (now "Aker Energy Ghana Limited").

This article has highlighted the question of whether a ***"significant change"*** in the circumstances was shown to have indeed occurred to warrant a review of the terms of the Agreement. It has been noted that most of the amendments made are not only unprecedented, but also highly problematic.

The amendments appear to permit the Contractor to approbate and reprobate and most of the variations appear to be tailored to the Contractor's circumstances arising from its activities in the Field. Further, there are a few amendments made which contravene or attempt to override the law under which the Contractor operates, that is, the Petroleum Act of 1984.

This sets an unfortunate precedent which one can only hope will not be exploited by other IOCs in future for their personal interests. The onus is upon duty bearers to always keep in mind Article 1(1) of the constitution which does not only affirm sovereignty in the people, but also emphasizes that it is in their name and for their welfare that the powers of government are to be exercised.

Dr. Thomas Kojo Stephens is a Senior Partner at Stobe Law; Advisory Board member, International Energy Law Advisory Group (IELAG); Principal Trainer, International Energy Law Training and Research Company (IELTRC); Senior Lecturer at the University of Ghana School of Law; and immediate past Vice-Chairman, Public Interest and Accountability Committee (PIAC).

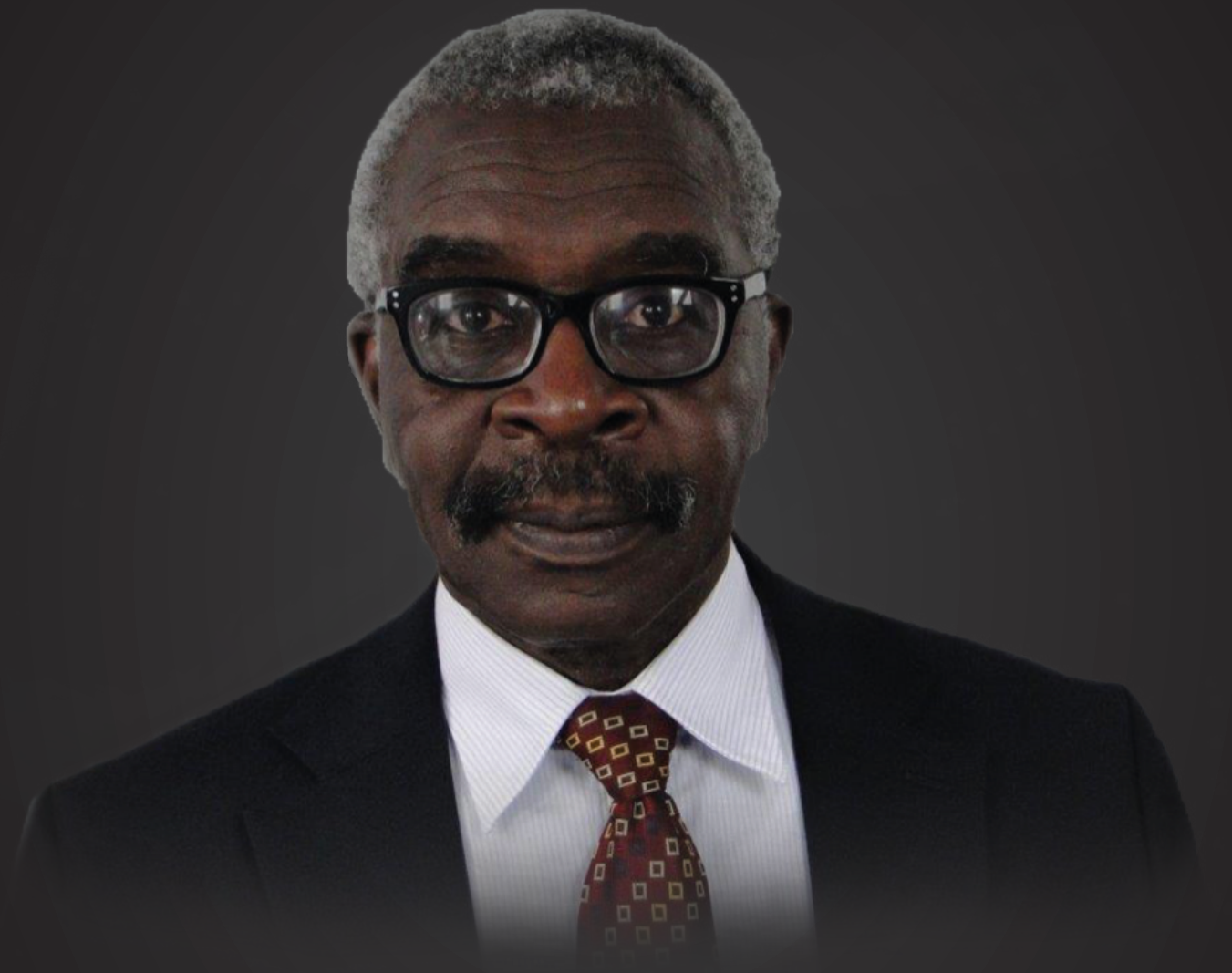
It has been noted that most of the amendments made are not only unprecedented, but also highly problematic.

The amendments appear to permit the Contractor to approbate and reprobate and most of the variations appear to be tailored to the Contractor's circumstances arising from its activities in the Field.

In Memoriam

Kojo Bentsi-Enchill

Founding partner of Bentsi-Enchill, Letsa & Ankomah



1950 - 2021

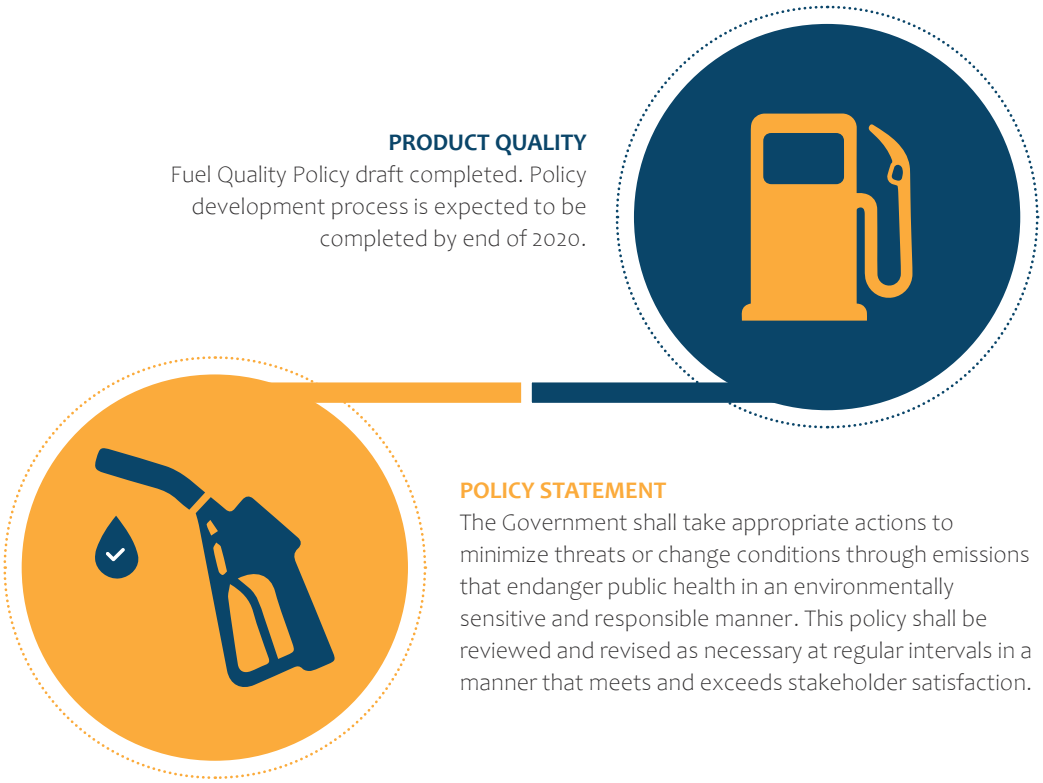
Chapter 4 of this report is dedicated to the memory of Mr. Kojo Bentsi-Enchil, whose outstanding intellect, visionary and selfless leadership have contributed immensely to the development of the legal regime governing the petroleum industry in Ghana.

Mr. Bentsi-Enchil, founding partner of Bentsi-Enchill, Letsa & Ankomah, passed away on February 13, 2021.


Downstream

5.0

Policy & Regulatory review



PRODUCT QUALITY
Fuel Quality Policy draft completed. Policy development process is expected to be completed by end of 2020.

POLICY STATEMENT
The Government shall take appropriate actions to minimize threats or change conditions through emissions that endanger public health in an environmentally sensitive and responsible manner. This policy shall be reviewed and revised as necessary at regular intervals in a manner that meets and exceeds stakeholder satisfaction.

The policy space saw some major progress in the period under review. The Ministry of Energy which is responsible for policy formulation, review, monitoring and evaluation finalized a new National Energy Policy which is to provide direction for the industry from 2020 to 2030.

The LPG Promotion Policy witnessed significant success. The NPA conducted various stakeholder engagements and undertook pilot implementation of the cylinder recirculation model in four districts.

Work on other policies that were started in previous years also progressed. For instance, the Ghanaian Content Policy that had already obtained Cabinet approval was advanced into implementation with the setting up of a Ghanaian Content Committee and preparation of draft Regulations. The draft National Fuel Quality policy was revised and is expected to be submitted to Cabinet for approval whereas work on the Petroleum Products Strategic Policy progressed steadily. The policy on Petroleum Hub is one which received massive attention in the year under review. The Ministry stepped up efforted in undertaking the preparatory activities required for the start of Phase 1 implementation of the Petroleum Hub Master Plan.

5.1 Product Quality

5.1.1 Fuel Quality Policy

The drafting of the National Fuel Quality Policy was completed in 2019 and is yet to be considered by Cabinet for approval, culminating in regulatory directives. The draft policy has been shared with industry stakeholders for review. The policy development process is expected to be completed by year end 2020.

The purpose of the National Fuel Quality Policy is to provide the framework for the development of guidelines, standards, and regulations. It will also provide the basis for the strategies, programs and actions required to reduce the risks of poor-quality fuels to the environment, health and durability of equipment using the fuels, and contribute to efforts towards curbing climate change.

The policy was formulated with broad stakeholder consultations that saw inputs from all players including the MoEn, NPA, EPA, BOST, TOR, CBOD and AOMCs.

In compliance with the broader agenda across the African region and the world at large, the policy shall be driven to ensure the principles and regulations of the international agreements such as the Paris Convention, the United Nations Framework Convention on Climate Change (UNFCCC) and the Africa Refiners Association's goal to ensure the highest standards of fuel quality are pursued along the supply and distribution chain in line with best practices worldwide.

Highlights of the draft policy are captured below:

5.1.1.1 Fuel Quality Policy Statement

It is the obligation of Government to ensure its citizens are protected and guaranteed a healthy environment. In recent times, there have been global environmental and health concerns regarding emissions from the energy sector, particularly from fuels for transportation.

The energy sector, undoubtedly, is a major contributor to air pollution and greenhouse gas emissions in Ghana by reason of the type of fuels burned. Having cleaner fuels available on the market and implementing tight standards will go a long way in contributing towards achieving lower emissions and better air quality.

This has necessitated the review of various specifications and standards regarding fuel quality in the country. The need for continuous improvement in the quality of all fuels supplied onto the local market cannot be overemphasized. In this regard, it is imperative that Government takes the necessary steps to ensure that a proper framework is developed to guide all efforts aimed at improving the quality of fuels sold in the country in a structured and well-coordinated manner.

Government shall provide the top-level support for all fuel quality review initiatives and will continually strive to demonstrate utmost leadership by ensuring that the highest standards of fuel quality are pursued along the supply and distribution chain in line with best practices worldwide.

The Government shall take appropriate actions to minimize threats or change conditions through emissions that endanger public health in an environmentally sensitive and responsible manner. This policy shall be reviewed and revised as necessary at regular intervals in a manner that meets and exceeds stakeholder expectations.

Having cleaner fuels available on the market and implementing tight standards will go a long way in contributing towards achieving lower emissions and better air quality.

Policy Goals

The goal of the fuel quality policy is to minimise air pollution from the use of fuels, protect public health and ensure that the useful life of equipment is well maintained.

Policy Objectives

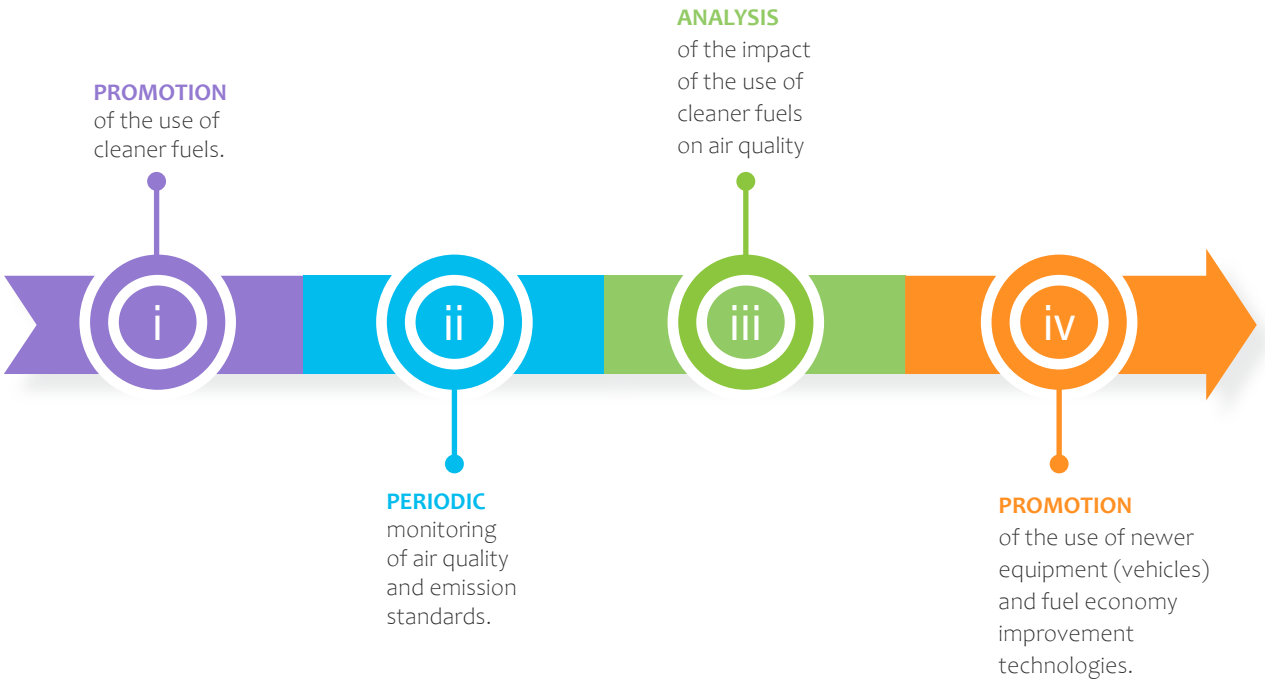
The objectives of this policy are as follows:

1	2	3	4	5
Improve air quality	Provide a framework for the development of future fuel quality standards, laws and regulations	Provide a structured approach for the implementation and enforcement of national fuel quality standards	Ensure that fuel standards are developed in line with new knowledge and recommendations of equipment manufacturers and users	Ensure that any fuel quality improvement investment is financially and socioeconomically sustainable.

Policy Strategies

The over-arching goal of this policy shall be achieved through the following strategies:

1 Improve air quality: The objective is to improve the quality of air in the country. A strategy will be adopted to systematically reduce or eliminate toxic compounds in fuels that have negative impact on the environment and public health.
This shall be achieved through:



2 Provide a framework for the development of future fuel quality standards, laws and regulations.
The objective is to provide the framework for the development of future fuel quality standards, laws and regulations. Periodic stakeholder engagements shall be held by the NPA, in collaboration with the GSA, to review existing national fuel quality standards.
Amendments to the standards shall be geared towards responding to new technologies and socio-economic development trends.

This shall be achieved through the following strategies:

i Engagements with OMCs, BDCs, EPA, DVLA, Consumer Advocacy Groups, refineries, vehicle and equipment manufacturers and dealers, fuel depot operators, and other relevant stakeholders;

ii GSA, in collaboration with all relevant stakeholders, shall review the existing fuel standards at least every five years, or periodically, in line with new technologies or socioeconomic developments

iii Clearly-defined procedures for the review of existing standards or development of new standard Clearly defined procedures for the review of existing standards or development of new standards;

iv Enact new laws and regulations to address policy drifts.

3 Provide a structured approach for the implementation and enforcement of national fuel quality standard. The objective is to provide a structured approach for the implementation and enforcement of national fuel quality standards.

The strategy to achieve the above objective is to:

1. **CLEARLY IDENTIFY** the relevant institutions required to implement and enforce fuel quality standards.
2. **DEFINE PROCESSES AND PROCEDURES** for implementation of fuel quality standards;
3. **DEFINE THE PROCESSES** and procedures for the enforcement of fuel quality standards;
4. **DRAFT APPROPRIATE** regulations to enforce national fuel quality standards.
5. **UNDERTAKE PUBLIC SENSITISATION** and education campaigns to help the general public understand the benefits of the use of cleaner fuels;
6. **DEFINE ROLES** and responsibilities of all relevant institutions with oversight responsibility for the procurement, supply and use of fuels in the country;

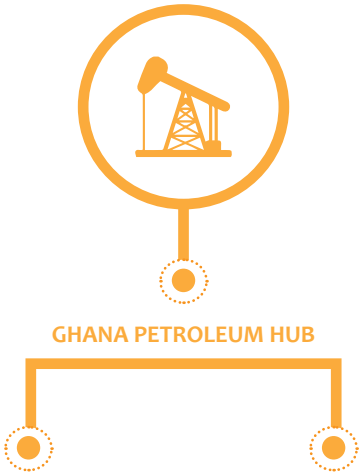
4 Ensure that fuel standards are developed in line with new knowledge and recommendations of equipment manufacturers and users. The objective is to ensure that all fuel quality standards are in line with new knowledge and recommendations of equipment manufacturers and users.

The strategies to achieve the above objective are as follows:

5 Ensure that any fuel quality improvement investment is financially and socio-economically sustainable.

The objective is to ensure that any fuel quality improvement that shall be undertaken and the investment required for such an improvement is financially and socio-economically sustainable. Financial and socio-economic studies shall be carried out to ascertain the costs and benefits associated with any fuel quality improvements before they are implemented.

The strategies to achieve this objective are:



Cabinet approved the Petroleum Hub Master Plan submitted by the Ministry of Energy for implementation.

The Hub is expected to be located on a 20,000acre land situated within the Bonyere Traditional Area in the Jomoro District of the Western Region

Phase One of the CRM pilot in Kade and Obuasi.38,472 newly branded cylinders in 3kg, 6kg and 14.5kg sizes

Phase Two of the CRM in the Jomoro and Yendi districts. A total of 7998 cylinders procured for the pilot programme

5.2 Policy Implementation Arrangements

5.2.1 Institutional Framework

The Ministry of Energy is the institution mandated by law to formulate policies on fuels specifications and standards. The NPA is responsible for development of regulations and public notices on specifications as well as its enforcement. The GSA is responsible for the development of fuel and environmental standards whereas the NPA and EPA are responsible for enforcement of fuel quality and environmental standards and emission standards, respectively.

As state-owned institutions, Tema Oil Refinery (TOR), BOST and Ghana National Gas Company are licensed to refine crude oil, keep strategic stocks of fuels and process natural gas respectively. Additionally, there exist two mini privately-owned refineries namely, Platon Gas Oil Ghana Limited and Akwaaba Link Investments. The Bulk Distribution Companies (BDCs) are licensed to import fuels for sale to Oil Marketing Companies (OMCs) and the LPG Marketing Companies. The setting of standards for fuels is a coordinated activity carried out by the following organizations: GSA, NPA, EPA, TOR, CBOD, AOMCs, ARA, the academic institutions, consumer protection associations and other relevant stakeholders. The existing institutional arrangements for developing standards and specifications for fuels shall be maintained to meet the objectives of this policy.

5.2.2 AfCFTA and Ghana's Policy Response

The African Continental Free Trade Area (AfCFTA) agreement is expected to be the largest free trade area since the formation of the World Trade Organization. The discussion about the trade in petroleum products across African countries is critical given the different specifications enforced by regulators within the countries.

There has been no policy response and regulatory traction from the Ministry and the regulator towards AfCFTA and its implications on the petroleum downstream.

There has been no policy response and regulatory traction from the Ministry and the regulator towards AfCFTA and its implications on the petroleum downstream. The policy gap creates the space for potential bottlenecks in the downstream value chain with respect to harmonisation of standards across the African continent as well as other possible problems that could adversely affect the sector. The AfCFTA is expected to be rolled out by January 2021, and it is imperative that attention is given to the design and formulation of policy to ensure the smooth transition under AfCFTA.

5.2.3 Price Parity Margin (PPM)

The temporary waiver granted to local refineries to produce gasoline and gasoil with Sulphur content of up to 1500 ppm was accompanied by the introduction of the price parity margin. The PPM fund was instituted as a price leveller to minimise any arbitrage that will be created when imports at 50ppm max and local production at 1500ppm were allowed to be comingled at the pump and traded as one standard. The differentials between the ULSD 10ppmS FOB Rotterdam Barge and the and gasoil 0.1% FOB NWE Barges were adopted as a proxy for estimating the inherent arbitrage in trading the 1500ppm gasoil.

In the case of gasoline, the NPA and industry were unable to identify a market benchmark with sulphur content close to the 1500ppm standard. With Ghana using the RON 95 10ppm benchmark as its standard benchmark for gasoline prior to the introduction of the PPM, there was no comparative benchmark for 1500ppm gasoline to establish a PPM.

This therefore ensured that the arbitrage from trading a 1500ppm spec as 10ppm accrued solely to traders (BDC and local refineries). There has therefore been no price parity margin accruing to the PPM from the sale of 1500ppm gasoline. This situation has created a source of agitation among BDCs who mainly import gasoline.

For the period August 2017 to September 2020, a total amount of USD$4.25mn accrued to the fund, of which USD1.56mn was accrued by BDCs and USD2.69mn by local refineries. As at September 2020 an amount of USD1.35mn has been paid by BDCs while no payments have been received from local refineries.

As was expected the ULSD 10ppmS FOB R'dam barges traded at a premium to the Gasoil 0.1% FOB NEW Barges. The average variance in the price of the two specifications for the period (1st August 2017 to 31st December 2019) was UDS13.58/mt, with a maximum variance of $31/mt and a minimum of USD4.25/mt.

Figure 15: Comparison of Gasoil FOB Prices ULSD 10ppmS FOB R'dam Barge vs Gasoil 0.1% FOB NWE BARGES.

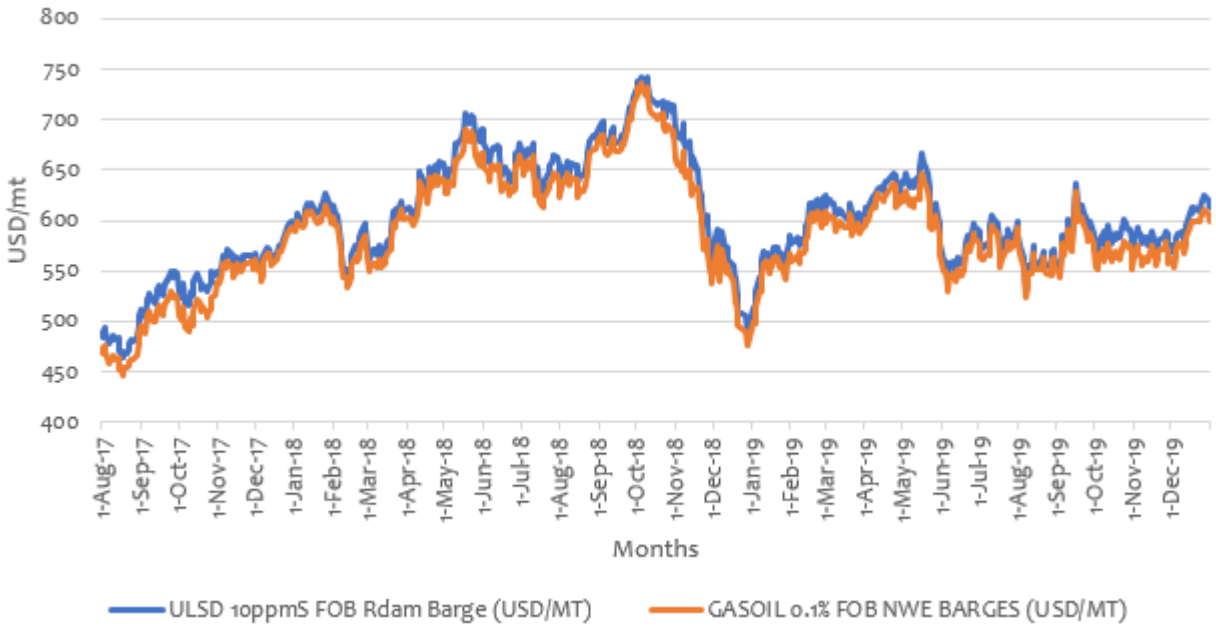


Figure 16: VARIANCE (USD) between ULSD 10ppmS FOB R'dam Barge and Gasoil 0.1% FOB NWE Barges.

5.2.4 Desulphurisation of local refineries

For the period under review and as at the end of Q2 of 2020, none of Ghana's three local refineries had made any investment in de-sulphurisers towards upgrading their refineries to produce petroleum products at a sulphur standard of 50ppm max. According to the Ministry of Energy, the Tema Oil Refinery (TOR) will require a capital investment of about USD150mn to upgrade its facility to a low sulphur fuel producing refinery, while the other two smaller refineries Akwaaba (4000bbls/d) and Platon Gasoil Ltd. (1800bbls/d) will have to be rebuilt to produce low sulphur fuels.

TOR has indicated that it will be unable to make the necessary investments to upgrade its facility due to a lack of funding amidst other priorities.

CITAC reports that except for refineries in South Africa, no other country in Sub-Saharan Africa has made the necessary investment to acquire de-sulphurisers. The Africa Refiners Association (ARA) has consequently recommended an extension of the deadline for local refineries to upgrade to low sulphur fuels from 2020 to 2023. The Dangote refinery, which is expected to be completed by 2021, will have the capacity to refine products at a sulphur standard of 10ppm max.

5.2.5 Market Sentiments

The market signals have pointed to a greater preference for gasoil and gasoline with sulphur levels at 50ppm max relative to 1500ppm.

Since the implementation of the product specification standards by the NPA and GSA in 2017, which set gasoline and gasoil at 50ppm max and a waiver granted local refineries to refine products with sulphur content of up to 1500ppm, OMCs have preferred to procure products with the relatively lower sulphur content.

Reasons cited for the preference for the 50ppm relative to 1500pm have largely been related to product quality and availability, as well as operational challenges that affect the availability of the 1500ppm products from local refineries.

The Ministry of Energy, after three years of work, completed the drafting of a new National Energy Policy for consideration by industry in 2019. The policy covers the entire energy sector with an overall vision of making Ghana self-sufficient in the provision of sustainable energy for both the local market and for export.

5.3 National Energy Policy

The Ministry of Energy, after three years of work, completed the drafting of a new National Energy Policy for consideration by industry in 2019. The policy covers the entire energy sector with an overall vision of making Ghana self-sufficient in the provision of sustainable energy for both the local market and for export. The policy seeks to make competitively priced energy universally accessible and readily available in an environmentally sustainable manner for the local market and export.

The Petroleum Downstream section of the policy seeks to identify the areas that require operational guidelines to achieve the goal of meeting local and export requirements for refined petroleum products.

The areas that form the framework for these operational guidelines are the following:

- **OPTIMISATION** of the downstream industry
- **STRATEGIC** stock management
- **ACCESS** to petroleum products
- **COMPETITIVE** pricing of petroleum products
- **QUALITY** of petroleum products
- **HEALTH, SAFETY, SECURITY** and Environmental standards
- **GHANAIAN CONTENT** and Ghanaian participation
- **BROAD RELATIONSHIPS** among the Oil Marketing Companies
- **COORDINATION** and Cooperation with other Regulatory agencies
- **GOVERNMENT** participation in the Downstream Industry
- **CARBON** footprint reduction
- **CLEAN** cooking solutions
- **EXPANSION** of gas pipelines for domestic and export markets
- **AUTOMATION** of downstream operations.

5.3.1 Sub-Goal for the Petroleum Downstream

The goal for the downstream industry is to ensure an effective and efficient functioning of the downstream petroleum industry.

5.3.2 Objectives

The policy objectives are to:

The Policy identifies nine (9) key issues in the petroleum downstream and provides directions on how Government could address these issues. The key issues identified and policy directives provided are as follows:

1

Inadequate refinery and storage capacity.

Policy direction:

- Mobilise public and private sector investment to expand national crude oil refining capacity, trading, storage and transportation to neighbouring countries and land-locked nations in the sub-region.
- Expand petroleum product storage capacity and extend bulk distribution infrastructure for petroleum products to all parts of the country.

2

Inadequate strategic stock of petroleum and refined products.

Policy direction:

- Encourage investment in strategic stock of petroleum and refined products
- Develop a well-structured and financially viable national strategic stock.

3

Inadequate infrastructure for downstream operations.
Policy direction:
- Develop a downstream infrastructure financing policy.
- Develop petroleum infrastructure in designated areas to support Ghana becoming a Petroleum Hub for the West African region.

4

Inefficient mode of transportation and distribution of petroleum products.
Policy Direction:
- Develop and implement a multi-modal (pipeline, railway line, road and lake) transportation network for petroleum products.
- Enhance the regulatory environment for the private sector participation in the development of a transportation network.
- Develop and implement a petroleum transportation infrastructure network to link the West African sub-regional markets.

5

Weak financial and technical regulatory capacity of the petroleum industry.
Policy direction:
- Improve governance and legislative framework in the downstream industry.
- Promote consolidation of Oil Marketing Companies to improve market share and financial strength.
- Develop and implement a plan to address the trade, forex exchange and credit risks of the industry.

6

Weak enforcement of existing laws governing Oil Marketing Companies (OMCs).
Policy direction:
- Regularly monitor and evaluate the operations of OMCs to ensure they conform to the existing laws.
- Collaborate with Industry Associations to develop their own standards to improve peer corporate governance and regulatory compliance.

7

Inadequate laws to govern the gas industry.
Policy direction:
- Initiate action for the development of legislation on taxes and levies on natural gas pricing in accordance with the approved pricing policy.
- Increase transparency in the enforcement of the existing laws.

8

Low access to Liquified Petroleum Gas (LPG).
Policy direction:
- Review and expand the Rural LPG programme to include peri-urban areas.
- Introduce the Cylinder Recirculation Model (CRM).

9

Huge investment requirements for natural gas infrastructure development.
Policy direction:
- Expand natural gas infrastructure and promote utilisation activities
- Provide an enabling environment for multiple suppliers and buyers into the natural gas industry.

The drafting of the Energy Policy had been finalized as at quarter 3 of 2020. As at the time of preparation of this report, the consultative processes with industry had been completed and the proposed policy submitted to Cabinet for consideration and approval. Upon approval and/or amendments by cabinet, the Ministry is expected to publish it and prepare a strategy document for implementation.

5.4 Ghanaian Content and Ghanaian Participation Policy

Following approval of the Ghanaian and Ghanaian Content Policy by Cabinet in 2018, the Ministry of Energy formed the Ghanaian Content Committee (GCC) which is to serve as the implementing anchor operating under the National Petroleum Authority. The GCC was formed and inaugurated on 23rd October 2018. The Committee is mandated to supervise, co-ordinate, administer, monitor and manage the development of Ghanaian Content in the petroleum downstream industry. It is also to coordinate the implementation of the provisions in the downstream Ghanaian Content Regulations to be developed. The GCC is expected to periodically publish its reports on Ghanaian Content activities to ensure transparency in its work.

The activities of the GCC are to be guided by regulations stipulated into Legislative Instruments passed by Parliament. These regulations are necessary in ensuring that the provisions of the policy are adhered to. The regulations are also necessary as they would provide various corrective measures that would apply to industry stakeholders who do not adhere to the law.

The Ministry of Energy commenced the preparation of these regulations in 2019 and has since circulated a draft document to stakeholders for input.

5.4.1 Highlights of Ghanaian Content Regulations

The purpose of these Regulations is to:

1

Ensure a minimum equity participation of Ghanaian ownership by
i. a petroleum service provider,
ii. a contractor of a petroleum service provider, and
iii. a subcontractor of a petroleum service provider,
in the provision of petroleum services as specified in the Schedule;

2

Promote the maximisation of value addition and job creation in the petroleum downstream industry value chain through
i. the use of local expertise
ii. the use of local goods and local services,
iii. businesses, and
iv. financing of petroleum downstream activities

3

Develop local capacity in all aspects of the petroleum downstream industry value chain through
i. education,
ii. skills transfer,
iii. expertise development,
iv. transfer of technology and know-how, and
v. research and development programmes;

4

Ensure the minimum local employment level in all aspects of the petroleum downstream industry value chain, within five years from the commencement of operations of petroleum downstream activities;

5

Iincrease the capacity and international competitiveness of petroleum service providers in the petroleum downstream industry;

6

Outline strategies for small and medium-scale enterprises to increase the participation of the small and medium scale enterprises in the petroleum downstream industry;

7

Ensure compliance with national and internationally accepted standards and safety regulations within the petroleum downstream industry;

8

Provide for a robust and transparent monitoring and reporting system to ensure the delivery of the policy objectives of Ghanaian content and Ghanaian participation;

9

Provide for the submission of the Ghanaian content and Ghanaian participation plans and related sub-plans by petroleum service providers in the petroleum downstream industry with respect to:

i. the provision of goods and services;
ii. the transfer of advanced technology and skills related to petroleum downstream activities to Ghanaians; and
iii. a recruitment and training programme

10

Ensure the supervision, coordination, implementation and monitoring of the Ghanaian Content and Ghanaian Participation Policy.

5.4.2 Ghanaian content and Ghanaian participation requirement

A petroleum service provider shall ensure that Ghanaian content and Ghanaian participation requirements specified under these Regulations are complied with when that petroleum service provider engages in a petroleum activity in the country.

The activities of the GCC are to be guided by regulations stipulated into Legislative Instruments passed by Parliament. These regulations are necessary in ensuring that the provisions of the policy are adhered to. The regulations are also necessary as they would provide various corrective measures that would apply to industry stakeholders who do not adhere to the law.

Local equity participation

1

A petroleum service provider who is granted a licence in the petroleum downstream industry shall, fulfil the local equity participation requirements specified in the Schedule.

2

The National Petroleum Authority shall, in granting a licence to a petroleum service provider, ensure that that petroleum service provider satisfies the local equity participation requirements specified in the Schedule.

3

Despite sub regulation (2), the Authority may, in consultation with the Minister, vary the requirement for local equity participation in the construction and operation of a major downstream infrastructure project due to

a) the lack of financial capacity by Ghanaians;
b) national strategic reasons as assigned by the Minister; or
c) any other reason determined by the Minister.

4

For purposes of sub regulation (3), the following shall be taken into account:

a) market study to establish the cost of the project and the capacity required; and
b) evidence of the publication of expression of interest.

5

Where there is a partial or total change in ownership and control of an existing petroleum service provider that is partly or wholly owned by a foreign entity, these Regulations shall apply.

Non-transferability of Ghanaian interest

1

The interest of a Ghanaian shareholder in an existing petroleum service provider is not transferable to a foreign owned entity.

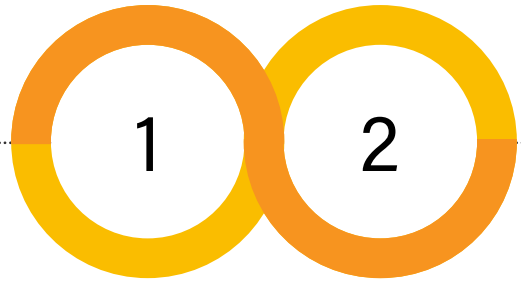
2

An indigenous Ghanaian company, dealer or reseller shall not sell any of the following to a foreign owned entity:

a) an existing retail outlet; or
b) any infrastructure related to petroleum

Supply of goods and services in the petroleum downstream industry

Goods and services for the petroleum downstream industry shall be procured from an indigenous Ghanaian company, compliant with the Ghanaian content and Ghanaian participation requirements, on a competitive basis and in a transparent manner.



Where a foreign entity is required to provide goods and services in the petroleum downstream industry, that foreign entity shall:
a) incorporate a company in the country and operate the company from the country; and
b) provide the goods and services in partnership with an indigenous Ghanaian company.

The Ministry anticipates that the regulations would be finalized and submitted to Parliament for consideration and enactment into law by year end 2020.

With the enactment of the regulations still pending, the activities of the GCC have in effect been put on hold. There was therefore no implementation activity by the Committee for the period under review and as at the publication of this report.

5.5 Petroleum Products Strategic Stock Policy

The preparation of the petroleum products strategic stock policy was started in quarter one of 2019. The purpose of the policy is to provide a framework and direction for the preparation of a plan for keeping strategic stocks of petroleum products in the country. Keeping such strategic stocks ensures that there is security and availability of products in the country.

It forms part of the general goal of ensuring universal access to adequate, reliable and cost-effective supply of petroleum products in the country.

The Ministry of Energy formed a Committee in quarter one of 2020 to begin drafting the Petroleum Products Strategic Stocks Policy. The Committee has since held two (2) meetings to discuss a Concept Paper that was prepared in 2018. The draft policy has been prepared by the Ministry and is being reviewed by committee. It is expected that the committee will continue with its work and will produce a final draft document before the end of year.

5.6 The Ghana Petroleum Hub Agenda

The Government of Ghana's vision of making Ghana a hub for refined petroleum products by the year 2030 remained a key feature of policy. Consequently, Cabinet, at its 48th meeting on 14th February 2019, approved the Petroleum Hub Master Plan, submitted by the Ministry of Energy for implementation.

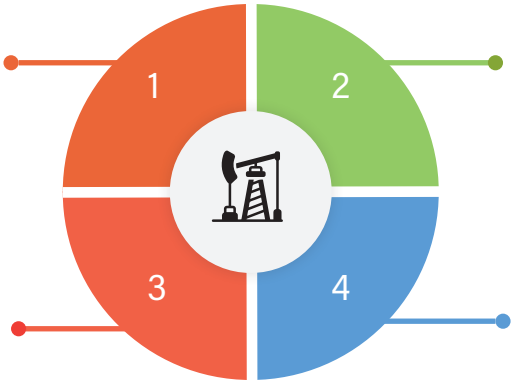
Per the Master Plan, Ghana's Petroleum Hub will require a total land size of about 20,000 acres to accommodate the various types of infrastructure necessary for the operations.

The Hub enclave is to be situated within Bonyere Traditional Area in the Jomoro District of the Western Region. The existing infrastructure in the country is inadequate to implement the objectives of the Petroleum and Petrochemical Hub, therefore, there is the need to develop new infrastructure in an enclave to facilitate activities and operations in the Hub.

The new infrastructure required has been categorized into four (4):

KEY INFRASTRUCTURE
which includes jetties, storage tanks, refineries, LNG facility, hub transmission infrastructure, power plants, petrochemical plants, lube blending plant, and transmission and storage Infrastructure for the land-locked countries.

INFRASTRUCTURE
for Offshore activities which will be used to support nautical services, repair and maintenance, exploration and rig equipment servicing. These would also include facilities, such as off-dock yard and dry-dock facilities for vessel repair, engineering and de-commissioning.



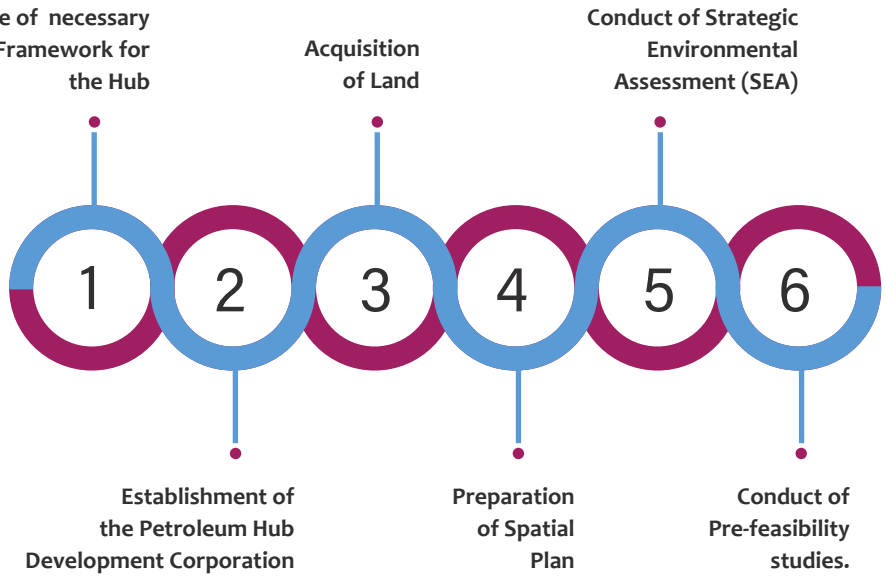
ANCILLARY INFRASTRUCTURE
which includes water treatment facilities, a waste management centre, commercial services, a residential area (with social amenities), a security and emergency response centre, solid logistics, transportation network, laboratory and a light to medium industrial area.

SOCIAL AMENITIES
which include health facilities and educational and training facilities among others to provide various services for the Hub.

It is estimated that the total cost of developing the Petroleum and Petrochemical Hub will be US$60 billion. Out of this amount it is expected that 90% would cover the cost of infrastructure to be provided by private investors whereas Government would be expected to invest 10% of the above amounting to about US$6 billion.

The Petroleum Hub Master Plan which is to be implemented over a 11-year period (2019-2030) would be executed in three (3) phases.

However, these phases are to be preceded by some preparatory activities which include the following:



5.6.1 Status of Preparatory Activities in the year under review

The Ministry of Energy has initiated some processes to implement the above-mentioned Preparatory Activities as follows:

5.6.2 Passage of necessary Regulatory Framework for the Hub

There is the need for requisite regulatory framework for implementation and operationalization of the Petroleum Hub. It is expected that the ongoing review of the National Petroleum Authority Act, 2005 Act 691 into a new Petroleum Downstream Act will make provision for operations in the Petroleum Hub.

5.6.3 Establishment of the Petroleum Hub Development Corporation

The Petroleum Hub Master Plan recommended the institution of a development corporation to coordinate activities for implementation of the Hub and management of the Hub on behalf of Government. Consequently, the Ministry has engaged the Office of the Attorney General and has drafted the Petroleum Hub Development Corporation Bill.

The draft Bill has received assent of Cabinet and is presently under consideration in Parliament. It is expected that the Bill will be enacted into law (an Act) which will see to the coming into existence of the Petroleum Hub Corporation. This activity is expected to be completed before close of the year 2021.

5.6.4 Acquisition of Land

The approved Plan recommended that the Hub is sited on 20,000 acres of land in the Jomoro Enclave of the Western Nzema Traditional Area in the Western Region. There is the need to begin the procedure for land acquisition as required by the Lands Commission Act, 2008 (Act 767) before some of the other preparatory activities can be undertaken.
Consequently, the Ministry of Energy has engaged the Lands Commission through the Ministry of Lands and Natural Resources to begin the process of land acquisition.

A delegation from the Ministry has visited the Paramount Chief of the Western Nzema Traditional Area to inform the Chief and sub-chiefs of Government's intentions.

The Ministry has also engaged a consultant to undertake initial studies towards acquisition of the land.

5.6.5 Preparation of Spatial Plan

The preparation of a Spatial Plan is a key activity as it would influence the distribution and positioning of key infrastructure in the Hub enclave. Consequently, it is necessary that a Spatial Plan is prepared before Government begins to engage prospective investors.

In view of the above, the Ministry has engaged the Land Use and Spatial Planning Authority (LUSPA) through the Ministry of Environment, Science, Technology and Innovation (MESTI) for the preparation of a Spatial Plan for the Petroleum Hub in line with provisions of the Land Use and Spatial Planning Act, 2016 (Act 925). The Spatial Plan is to cover the 20,000 acres of land in the Jomoro Enclave of the Western Nzema Traditional Area in the Jomoro Municipal Area in the Western Region.

LUSPA has prepared a Cadastral Plan of the proposed land and submitted same to the Ministry of Energy for use in preparation of a Site Plan. The Ministry has had an inception meeting with LUSPA for the start of their work. Subsequently, representatives from the Ministry and LUSPA travelled to the land location where the LUSPA team was introduced to the Paramount Chief and District Coordinating Council.

5.6.6 Conduct of Strategic Environmental Assessment (SEA)

The conduct of a Strategic Environmental Assessment (SEA) is a key activity in this Preparatory Activities stage, especially as it is a requirement for such projects under the Environmental Protection Agency Act, 1994 (Act 490).
In view of the above, The Ministry of Energy requested the Ministry of Science, Technology and Innovation to facilitate the preparation of a Strategic Environmental Assessment

PRICE PARITY MARGIN

- A total amount of **$4.25**mn has accrued to the Price Parity Margin Fund as at September 2020
- **$1.35**mn has been paid by BDCs so far, no payment has been received from local refineries

LICENSING

Total number of BDC licenses stood at **30.**

5 companies had their licenses revoked

9 BDCs imported above 100,000mt in 2019 compared to 7 in 2018 Five companies imported products above 50,000mt but below 100,000mt while 12 BDCs import brought in cargoes below 50,000mt.

(SEA) by the Environmental Protection Agency (EPA) for the Petroleum Hub. The Ministry has, since this request, engaged with the EPA and held meetings to discuss a draft Work Plan for preparation of the SEA on the Petroleum Hub Master Plan.

5.6.7 Conduct of Pre-feasibility studies

The Ministry is presently preparing to engage a consultant to conduct a feasibility study that will provide value for money analysis among others for the Petroleum Hub Master Plan implementation.

5.7 Other policies (under implementation)

Implementation of other key Government policies already in place continued in the year under review. Policies, such as the National LPG Promotion Policy, Zonalization Policy, Policy on Primary Distribution and Unified Petroleum Pricing, Policy on Petroleum Prices Liberalization, Bunkering Policy, Policy on Refineries and Policy on Premix, were all implemented.

There were some issues with some of these policies and these issues have been captured as regulatory issues in the Regulatory Review section of this report.

5.8 Regulatory Interventions

5.8.1 License reforms (Review of BDC license framework and elimination of OTC license) Elimination of OTC License

The Governing Board of National Petroleum Authority (NPA), on 6th December 2018, notified industry of its decision to discontinue the OTC license from its category of licenses issued. A detailed transition road map to gradually phase out all nineteen (19) existing licensed Oil Trading Companies (OTCs) was drawn up.

The road map proposed that all existing OTCs be given a maximum period of six (6) months, ending 30th June 2019 to wind up their activities. However, OTCs who had contractual arrangements that extended beyond 30th June 2019m were be granted the opportunity to make a presentation to the NPA.

The Governing Board of National Petroleum Authority (NPA), on 6th December 2018, notified industry of its decision to discontinue the OTC license from its category of licenses issued. A detailed transition road map to gradually phase out all nineteen (19) existing licensed Oil Trading Companies (OTCs) was drawn up.

These OTCs were required to provide evidence of binding contractual agreements with their clients to the NPA for review and further consideration for extension of the deadline to the end of September 2019 to enable them wind up their activities.

The NPA convened a meeting with the OTCs on 25th February 2019, to communicate the decision; issuing a letter on 27th February 2019, to notify the OTCs of the NPA's decision, and the transition arrangement to discontinue the OTC license from the category of the license regime.
The Licensing Division was requested to review the existing contractual obligations of the OTCs and adopt a consultative approach in the phasing out of the license.

The following companies submitted evidence of existing contractual agreements for an extension ending 31st December 2019, to enable them wind up their activities:

A Public notice was issued in November 2019, informing all Players in the Petroleum Downstream and the general public of the withdrawal and discontinuation of the Oil Trading Company (OTC) license effective 31st December, 2019.

Review of BDC license Framework

The NPA board introduced a two-tier system for licensing BDCs to allow non-compliant BDCs to be able to operate in a partly restricted manner. As a result, BDCs are to be tiered as category 1 and category 2 BDCs.

The Bulk Import, Distribution and Export License (Category 1 BDC License), authorizes a company to:

01
Import crude oil and/or refined petroleum products, as well as store, distribute and sell petroleum products wholesale to Oil/LPG Marketing Companies; and

02
Export petroleum products to neighbouring countries under customs seal.

The Bulk Distribution and Export License (Category 2 BDC License) authorizes a company to:

The requirements for the Bulk Import, Distribution and Export License (Category 1 BDC License) are spelt out in Public Notice NPA.N.009 whilst the requirements for the Bulk Distribution and Export License (Category 2 BDC License) are spelt out in Public Notice NPA.N.009A.

See Appendices 1 and 2.

5.8.2 Operationalization of BRV tanker park

The downstream distribution trade has for long been characterised by scenes of indiscriminate Bulk Road Vehicles parking along the roads close to tank farms when preparing to load or commence the journey to the designated discharge points. The Tema petroleum infrastructure enclave that accounts for 81% of the redistribution of petroleum products nationwide has been a major source of safety concern, considering the high BRV traffic in the area. This high traffic was characterised by a long queue of BRV parking along the roads in the enclave, a situation that triggered public discomfort and industry public safety concerns. In a move to address this, the National Petroleum Authority, in consultation with industry, commissioned the construction of a parking Terminal at Kpone (part of the Tema enclave) in the Greater Accra Region in March 2016.

The project was completed and successfully inaugurated on 1st May 2019. The parking terminal can accommodate 1000 Bulk Road Vehicle (BRV) Tanker trucks and is expected to improve standards in the petroleum downstream industry. The investment also exhibits NPA's long term commitment to curb safety risks posed by the indiscriminate parking of Tankers (Bulk Road Vehicles) along the road leading to Tema Oil Refinery (TOR) and other depots in Tema.

Figure 17: CEO of NPA, Alhassan Tampuli, at the inauguration of the BRV tanker park in Kpone [210]

Figure 18: CEO of TOR, Isaac Osei, at the inauguration of the BRV tanker park in Kpone.

210 Kindly refer to the 2018 Industry Report for more information on the LPG Promotion policy.

5.8.3 Bulk Road Vehicle (BRV) Tracking Phase 3 programme- Electronic Cargo Tracking System

The NPA in a bid to eliminate the fraudulent claims against the Unified Petroleum Price Fund (UPPF), approved the introduction of a BRV Tracking System in 2010. The UPPF is a fund set up under the NPA ACT 691 to fund the cost of transporting petroleum products from petroleum storage depots to user discharge points.

The primary object of the UPPF is to eliminate variances in the price of petroleum prices resulting from disparities in the transportation costs due to location. As part of its *modus operandi,* Oil Marketing Companies are required to file claims for refund of their transportation costs according to set transportation rates. In effect, the longer the distance, the higher the claims. This exposed the UPPF to fraudulent claims as discharge points were sometime falsified to increase distances and claims.

The Electronic Cargo Tracking System (ECTS) was instituted to enable the UPPF independently confirm the location and quantities of delivery of petroleum products from the loading depots to all discharge points (retail outlets and bulk consumer sites). The ECTS operates with an automated Tanker Sealing/Locking mechanism using a Global Position System (GPS), General Packet Radio Services (GPRS) and Radio Frequency Identification Device (RFID) enabled Electronic Locking System in order to ensure effective quality and quantity assurance.

In 2019, the contract for installation of electronic locking seals and tracking devices was awarded following tender. The ECTS was formally launched in January 2020, with a command centre set up at the NPA head office with operational activities beginning in April 2020.

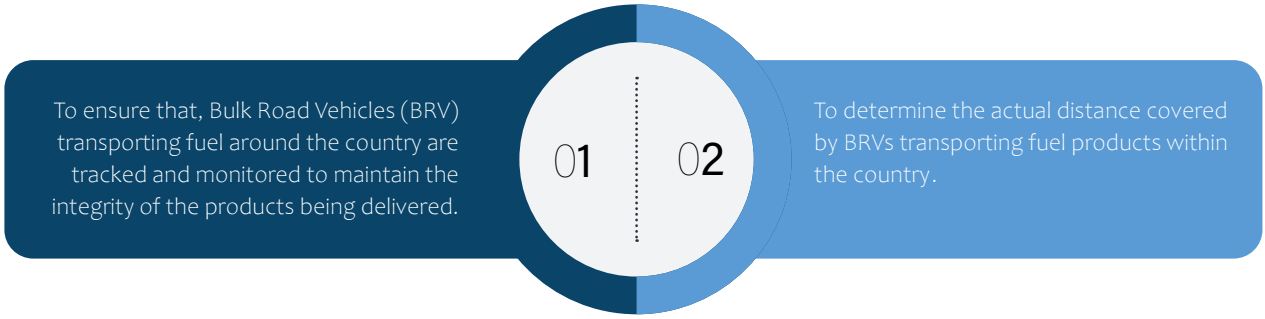
The ECTS was introduced to replace and improve on the existing fuel tracking system. As of September 2020, a total of 1000 BRV's had been fitted with In-Vehicle-Management (IVM) across country under this project. With this system, the National Command Centre can verify the distance covered by BRVs. Field managers stationed at all depots are tasked to electronically seal all BRVs, while the National Command Centre can monitor transportation of products from depots to retail outlets in real time.

Figure 19: In-Vehicle Management installed into a Bulk Road Vehicle (BRV) for tracking

Source : National Petroleum Authority

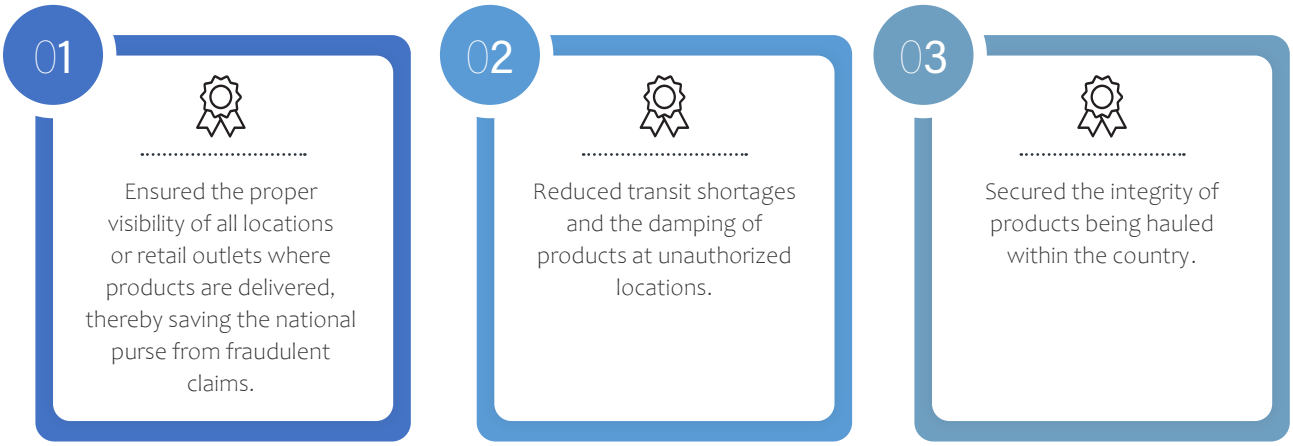
5.8.3.1 Objective of ECTS

The objectives of the ECTS project are:



Successes

Since its operationalization the ECTS has achieved the following successes:



Safety Training and certification of BRV drivers

The NPA together with Road Safety Limited (RSL) developed modules for training and certification of Bulk Road Vehicle (BRV) drivers in the industry. This training will lead to the issuance of additional licenses to the drivers.
The plan is to begin training of LPG BRV drivers as a priority group for the implementation of the CRM. Scheduling of BRV drivers for training and certification commenced in 4th quarter of 2019.

The training programme began in January 2020. One hundred and eighty (180) BRV drivers had been trained and certified as at 13th March 2020.

5.9 Enforcement of National Oil Loss Control Manual

The NPA successfully launched the Oil Loss Control Manual on 7th November 2019 to curb the frequent losses of oil associated with petroleum product loading, transportation and during sales at outlets.

The manual stipulates, among other things, the minimum requirements of the standard procedure and methods to be used to determine the quantity of petroleum products in storage tanks, river barges and BRVs used in the distribution of petroleum products relating to purchase, sale and inventory control in the petroleum downstream.

Oil losses have led to inaccurate calculation of taxes, margins, fees, transit losses and others, all of which the manual seeks to address.

The Oil Loss Committee, comprising the industry stakeholders, have since continued in its efforts to ensure the implementation of the guidelines in the manual.

5.10 Petroleum Product Marking Scheme

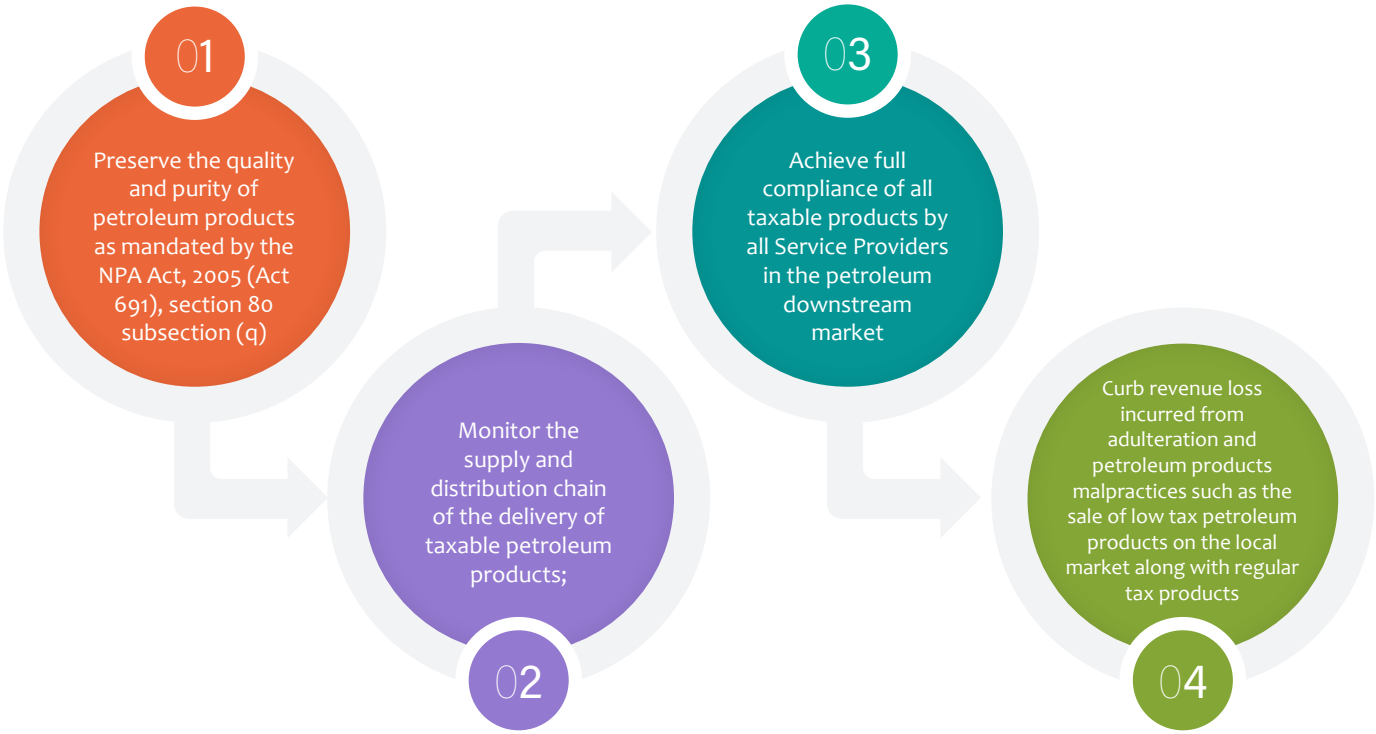
The PPMS programme, established in 2012 by the NPA, was a response to the growing occurrences of petroleum smuggling, dumping of untaxed products and adulteration of petroleum products. Perpetrators of these illegal activities often distribute their products through the traditional channels like retail outlets and bulk consumer points.

In some instances, some perpetrators use hydrocarbons such as Naphtha and mid distillate as adulterants.
These practices lead to major losses in government revenue and compromises the quality of products, leading to damage to vehicle engines and breaches of environmental and health standards.

The PPMS provides a foundation for an effective quality monitoring system by introducing a marker in trace quantities into Bulk Road Vehicles (BRVs) loaded with petroleum products at the depot prior to delivery to the market. The marker is a unique identifier used to distinguish the various types of petroleum products in the country.

The PPMS marks all regular tax products (gasoil and gasoline), low tax products (Marine Gas Oil, local, kerosene and premix) and tax-exempt products (gasoil and gasoline). It also has a mandate to monitor all retail outlets and bulk consumers across the country and has a presence at all operational depots in the country.

The PPMS has the following objectives:



The PPMS provides a foundation for an effective quality monitoring system by introducing a marker in trace quantities into Bulk Road Vehicles (BRVs) loaded with petroleum products at the depot prior to delivery to the market. The marker is a unique identifier used to distinguish the various types of petroleum products in the country.

5.11 Monitoring Technology

PPMS, through a contract with Authentix Inc., used a range of fuel supply chain integrity technologies for the detection and prevention of smuggling and adulteration. The presence or absence of markers measured qualitatively and quantitatively, assist in determining whether a petroleum product has been adulterated or diluted.

The markers (BLD 01 & BLD 02) are added at parts per billion concentrations at the depot of loading before delivery to the designated point of consumption. These markers are undetectable by standard chemical analysis. Only an Authentix Inc. field and laboratory equipment can detect the presence of the markers once they have been integrated into the petroleum product.

Since the inception of the PPMS, there have been two major phases to the programme as detailed below.

5.1.1 Phase One I

The NPA commenced Phase one of the Petroleum Product Marking Scheme on February 2013. Field monitoring in Phase I was conducted with the LSX 2000 field monitoring device. Results in the field appear as Pass, Suspect, Suspect Dot or Fail. All field monitoring equipment are interactive.

The LSX 2000 data is stored in an encrypted format with access granted to certain individuals to retrieve such information.

All field officers of the Authority and retail outlet representatives see qualitative results. However, the quantitative marker concentration is stored internally in the field device to be extracted. The logic behind this approach is to ensure that no external stakeholders are privy to the pass/fail criteria set by the Authority. The configuration of the device, however, allows individuals with the required credentials to access this data.

The qualitative field results are as follows:

PASS: The result obtained on the LSX 2000 shows there has been no dilution and or adulteration of the domestic product. The result is recorded on the Site Visit Form and no further action is taken.

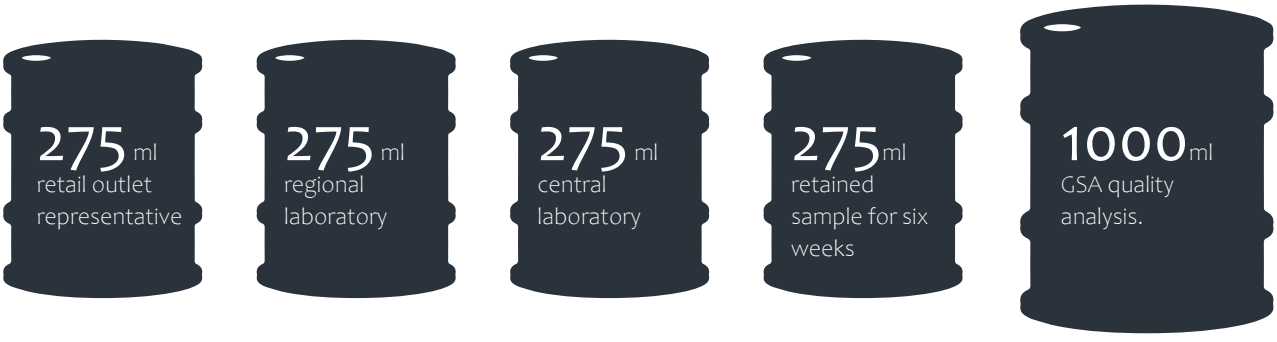
SUSPECT: The result indicates there could have been illegal activity compromising the quality of the petroleum product. However, the result is not conclusive. In this event, a chain of custody is triggered.

SUSPECT DOT: The equipment is not familiar with the sample. In this even, a chain of custody procedure is triggered.

FAIL: There is a clear dilution and or adulteration of the sample. In this event, a chain of custody is triggered and the NPA regional manager is immediately notified and further action is taken as directed by the zonal manager.

Activation of chain of custody implies the taking of five samples, audit of stock books and dipping of stock in the underground storage tank for the suspected product. The five samples taken are locked and sealed in the presence of the retail outlet representative.

The destination of the final samples are as follows:



Following field analysis, confirmatory tests are conducted on the MSX 1000 laboratory device. The laboratory device is able to distinguish quantitatively the concentration of the main fuel and adulterant markers. This aids in the final decision making for the product in question and sanctions to be applied to the Oil Marketing Company.

5.11. 2 Phase II of Petroleum Products Marking Scheme

The NPA commenced phase II of PPMS on April 1, 2019, marking petroleum products with new marker concentrate, GH210 (new main petroleum products blend).

In implementing Phase II of the PPMS programme, the following equipment were rolled out:

01

The new MSX 2000 device was installed in the Accra/Tema zonal laboratory and Central laboratory located at the GSA. Nominated officers were trained on the use of this equipment in May 28-29, 2019.

02

The latest and more advanced model of the liquid photo spectrometer, LSX 3000 equipment was rolled out in July 2019 for field monitoring activities.

03

Commencing July 2019, a complete set of 25 equipment were made available to all zones during the four (4) monitoring exercises conducted during 2019. Preventive maintenance was performed on all equipment before the start of each monitoring exercise.

All managers, field officers and laboratory assistants of the Quality Assurance Division were trained by Authentix Inc. on the use of the new technology, the LSX 3000 equipment.

The total volume of petroleum products marked from January to December 2019 was **3,821,953,600** litres. Gasoline accounted for 46.30% of petroleum products marked whereas diesel accounted for 51.06% of petroleum products marked during the period. The remaining petroleum products, termed adulterants by the PPMS, made up 2.65% of total petroleum products marked. The volume of products marked increased by 5.88% over that recorded in 2018.

The total volume of petroleum products marked from January to December 2019 was 3,821,953,600 litres. Gasoline accounted for 46.30% of petroleum products marked whereas diesel accounted for 51.06% of petroleum products marked during the period.

Table 9: Volumes of petroleum products marked from January 2019 to December 2019.

Product (litres)	Super	Diesel	Kerosene	Premix	MGO local	Total
Jan 19	155,087,300	161,431,400	216,000	6,007,500	1,809,000	324,551,200
Feb 19	136,518,300	150,812,300	963,000	6,372,000	1,795,500	296,461,100
Mar 19	135,431,900	156,878,700	-	7,870,500	2,295,000	302,476,100
Apr 19	150,414,200	172,085,800	688,500	7,695,000	2,862,000	333,745,500
May 19	148,321,500	165,603,900	108,000	5,791,500	2,992,500	322,817,400
Jun 19	132,238,800	154,522,900	495,000	5,292,000	2,169,000	294,717,700
Jul 19	148,283,200	173,221,400	-	6,939,000	1,759,500	330,203,100
Aug 19	146,009,000	157,985,050	495,000	5,697,000	1,224,000	311,410,050
Sep 19	141,870,500	151,899,000	468,000	5,049,000	931,500	300,218,000
Oct 19	149,575,000	166,963,000	760,500	5,008,500	1,903,500	324,210,500
Nov 19	157,180,750	163,588,900	162,000	7,006,500	2,160,000	330,098,150
Dec 19	168,521,200	176,340,600	337,500	3,334,500	2,511,000	351,044,800
Total per product	**1,769,451,650**	**1,951,332,950**	**4,693,500**	**72,063,000**	**24,412,500**	**3,821,953,600**
% Per Product	**46.30**	**51.06**	**0.12**	**1.89**	**0.64**	**100.00**

5.11.3 Marker Used

The quantity of marker used is directly proportional to the volume and type of product. Main fuels (super and diesel) are marked with blend 1/GH210 marker whereas the PPMS defined adulterants (premix, kerosene, MGO local, low tax super and diesel) are marked with blend 2/GH220 marker. A total of **45,083,864** millilitres of marker blends was used to mark petroleum products across the country from January to December 2019. This represents a 2.56% decrease in the volume of marker used compared to 2018. This is because more regular taxed products, which require lesser marker quantities, was marked in 2019 as compared to 2018.

Table 10: Quantity of marker type used from January to December 2019.

	Total Marker per month		
Month	BLEND 1 / GH210 (ML)	BLEND 2 / GH220 (ML)	TOTAL PER MONTH (ML)
Jan 19	3,067,386	890,630	3,958,016
Feb 19	2,720,424	1,220,935	3,941,359
Mar 19	2,813,011	1,058,750	3,871,761
Apr 19	3,086,437	1,255,090	4,341,527
May 19	3,054,285	869,445	3,923,730
Jun 19	2,727,652	1,097,625	3,825,277
Jul 19	3,062,768	1,196,315	4,259,083
Aug 19	2,904,031	1,003,365	3,907,396
Sep 19	2,803,730	198,450	3,002,180
Oct 19	3,001,415	240,690	3,242,105
Nov 19	3,063,362	237,620	3,300,982
Dec 19	3,266,908	243,540	3,510,448
Total	**35,571,409**	**9,512,455**	**45,083,864**

It is, however, important to note that, since the inception of Phase II of the PPMS on April 1, 2019, no sanctions have been imposed on the OMCs.

This is because the introduction of marker and new technology requires an approximate six (6) month -permeation period before full enforcement operations can begin. Hence, defaulting OMCs for the October and November 2019 monitoring exercises were not sanctioned.

The PPMS phase II is expected to improve quality of products at the retail outlets, for consumers of petroleum products, reduce failure rates at retail outlets as well as recover revenue, which would have been lost through the diversion of subsidized petroleum products. This phase is anchored in technological advancements in the markers as well as the detection of proprietary equipment.

The PPMS phase II was officially launched on 19th February 2020 by NPA.

5.11.4 Retail Outlets Monitored

The average retail outlet failure rate for 2019 was 1.99%, a 0.64% increase on that recorded in 2018. As at August 2019, retail outlet failure rate was 5.2% which was the highest in the year. At the end of the November 2019, monitoring exercise, the retail outlet failure rate was 2.7%. The reduction in failure rate could be attributed to the consistency of the monthly monitoring exercise from August 2019.

The retail outlet failure rate, as at end of the November 2019 monitoring exercise for Accra/Tema, Kumasi, Takoradi,

Tamale and Volta, were 3.8%, 0.7%, 2.8%, 2.6% and 3.7% respectively with Accra/Tema zone recording the highest failure rates.

The retail outlet suspect rate was 0.85% for 2019 compared to 0.52% in 2018. The pass rate for 2019 was 97.1% compared to 98.14% recorded in 2018.

Table 11: Retail Outlets Pass Rate

No. of outlets planned	No. of outlets visited	No. of outlets operational	Pass	%
Feb 19 2,509	Feb 19 2,489	Feb 19 2,309	Feb 19 2,261	Feb 19 97.90%
Mar 19 2,410	Mar 19 2,273	Mar 19 2,172	Mar 19 2,108	Mar 19 97.10%
May 19 2,308	May 19 2,305	May 19 2,161	May 19 2,161	May 19 100.00%
Jul 19 2,056	Jul 19 2,078	Jul 19 1,946	Jul 19 1,946	Jul 19 100.00%
Aug 19 2,095	Aug 19 2,074	Aug 19 1,887	Aug 19 1,737	Aug 19 92.10%
Oct 19 2,228	Oct 19 2,240	Oct 19 2,083	Oct 19 1,999	Oct 19 96.00%
Nov 19 2,214	Nov 19 2,208	Nov 19 2,039	Nov 19 1,968	Nov 19 96.50%
Total 15,820	Total 15,667	Total 14,597	Total 14,180	Total 97.10%
	% 99	% 93.2	% 97.1	

It is, however, important to note that, since the inception of Phase II of the PPMS on April 1, 2019, no sanctions have been imposed on the OMCs. This is because the introduction of marker and new technology requires an approximate six (6) month -permeation period before full enforcement operations can begin. Hence, defaulting OMCs for the October and November 2019 monitoring exercises were not sanctioned

Table 11 continued

Suspect	%	Suspect QC	%	Fail	%
Feb 19 **16**	Feb 19 **0.70%**	Feb 19 **-**	Feb 19 **0**	Feb 19 **32**	Feb 19 **1.40%**
Mar 19 **24**	Mar 19 **1.10%**	Mar 19 **-**	Mar 19 **0**	Mar 19 **40**	Mar 19 **1.80%**
May 19 **-**	May 19 **0.00%**	May 19 **-**	May 19 **0**	May 19 **-**	May 19 **0.00%**
Jul 19 **-**	Jul 19 **0.00%**	Jul 19 **-**	Jul 19 **0**	Jul 19 **-**	Jul 19 **0.00%**
Aug 19 **15**	Aug 19 **0.80%**	Aug 19 **36**	Aug 19 **1.90%**	Aug 19 **99**	Aug 19 **5.20%**
Oct 19 **22**	Oct 19 **1.10%**	Oct 19 **-**	Oct 19 **0**	Oct 19 **63**	Oct 19 **3.00%**
Nov 19 **15**	Nov 19 **0.70%**	Nov 19 **-**	Nov 19 **0**	Nov 19 **56**	Nov 19 **2.70%**
Total **92**	Total **0.60%**	Total **36**	Total **0.20%**	Total **290**	Total **2.00%**
Total **0.6**		% **0.2**		% **2**	

5.11.5 Products Sampled

The diesel failure rate decreased by 0.15% from 0.95% in 2018 to 0.8% in 2019. The gasoline **failure** rate, on the other hand, increased from 0.35% in 2018 to 1.1% in 2019.

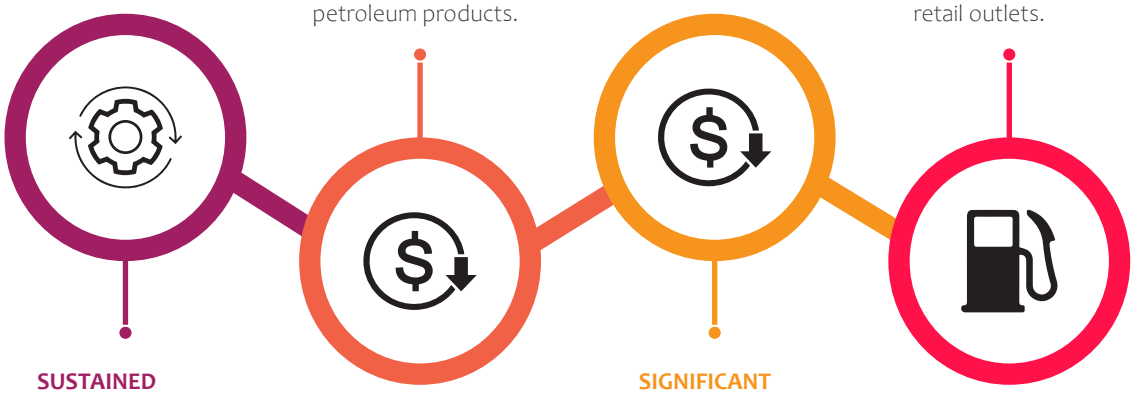
Diesel suspect category increased from 0.38% in 2018 to 0.6% in 2019. The gasoline suspect category also increased from 0.11% in 2018 % to 0.3% in 2019. There was one (1) case of grade swapping between differentiated gasoline and domestic gasoline recorded in the August 2019 monitoring exercises.

The average retail outlet failure rate for 2019 was 1.99%, a 0.64% increase on that recorded in 2018. As at August 2019, retail outlet failure rate was 5.2% which was the highest in the year. At the end of the November 2019, monitoring exercise, the retail outlet failure rate was 2.7%. The reduction in failure rate could be attributed to the consistency of the monthly monitoring exercise from August 2019.

Successes of the PPMS

REDUCTION
in the retail outlet failure rate, which is indicative of the decrease in the malpractices in the distribution and sale of petroleum products.

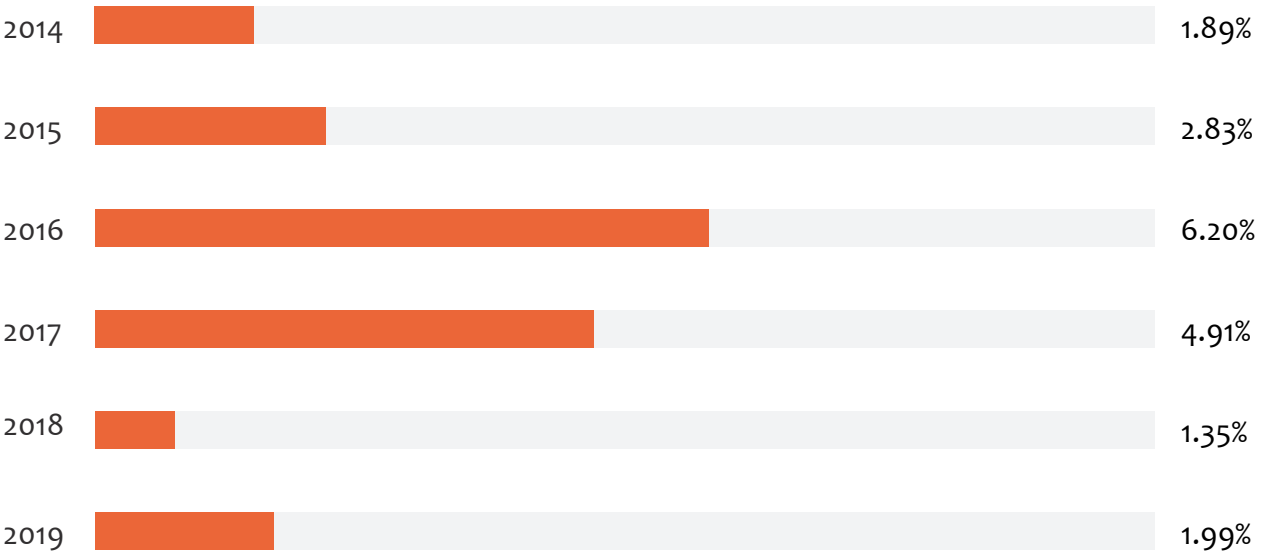
CONSUMERS
of petroleum products are assured of improved quality of products at the retail outlets.



SUSTAINED
successful marking and field monitoring of marked petroleum products

SIGNIFICANT
reduction in the fuel tax revenue loss and subsidy abuse.

Figure 20: PPMS Field monitoring results capturing retail outlet failure rates (2014 - 2019).

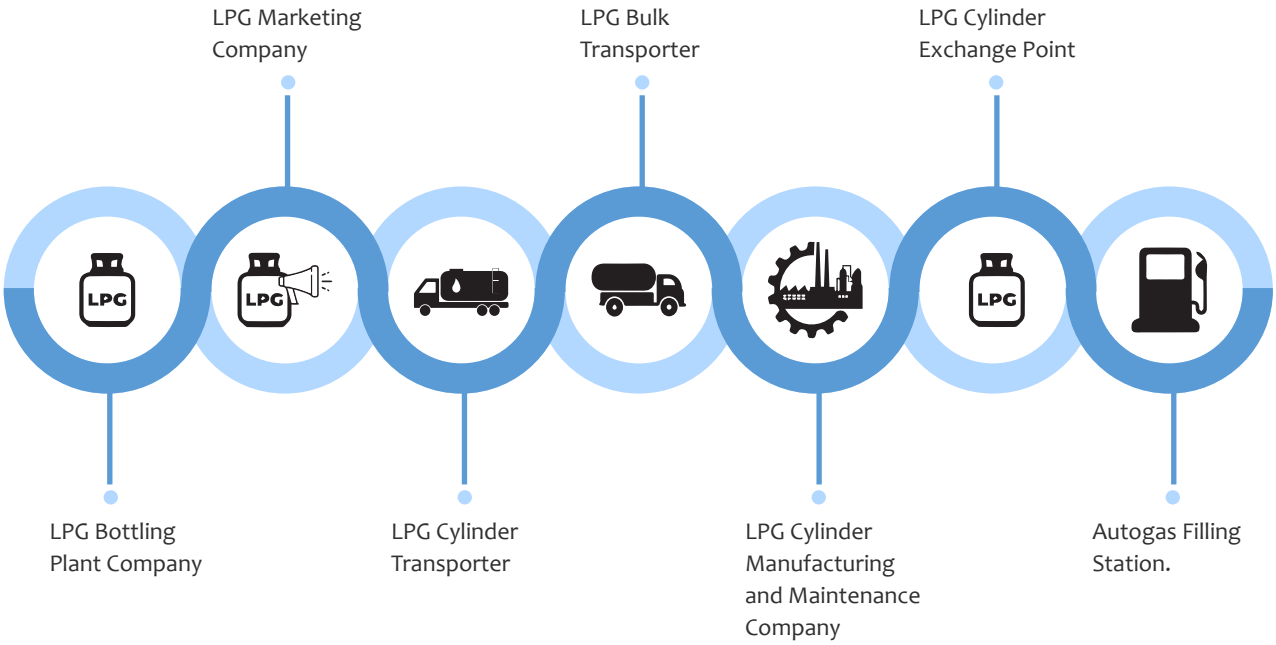


5.12 Update on The LPG Promotion Policy

The LPG Promotion Policy, introduced by Government in 2017, was further advanced with the development of some regulatory framework for operationalising the policy and the commencement of the pilot phase. The National Implementation Committee as well as various sub-committees held twenty-three (23) meetings in 2019. Officials of the National Petroleum Authority (NPA) and selected members of the Implementation Committee also embarked on a working visit to Liquefied Petroleum Gas (LPG) refilling outlets in the Obuasi, Adansi North, Kwaebibirem and Denkyembour Districts.

5.12.1 Regulatory Framework

The NPA, in collaboration with the Implementation Committee, developed the license requirements and frameworks for the under-listed categories under the Cylinder Recirculation Model:



Specifically, the following regulatory guidelines and directives in respect of the above were developed and are being reviewed and finalized prior to the full implementation of the **LPG Cylinder Recirculation Model:**

I. **Public Notice NPA.N.009B** - Requirements to obtain a Liquefied Petroleum Gas (LPG) Bulk Distributing Company License; (*see Appendix 3)*

II. **Public Notice NPA.N.009C** - Requirements to obtain an LPG Bottling Plant Company License;

III. **Public Notice NPA.N.009D** – Requirements to obtain an LPG Marketing Company License;

IV. **Public Notice NPA.N.009E** – Requirements to obtain an LPG Bulk Transporter License;

V. **Public Notice NPA.N.009F** – Requirements to obtain an LPG Cylinder Transporter License;

VI. **Public Notice NPA.N.009G** – Requirements for a Permit to construct and operate a Liquified Petroleum Gas Cylinder Exchange Point;

VII. **Public Notice NPA.N.009H** - Requirements for a Permit to construct and operate a Liquified Petroleum Gas (Autogas) Filling Station;

VIII. **Construction Permit Framework** for an LPG Bottling Plant;

IX **Construction Permit Framework** for an LPG (Autogas) Filling Station;

X **Authorization Permit Framework** to operate an LPG Bottling Plant;

XI **Authorization Permit Framework** to operate an LPG (Autogas) Filling Station;

XII **Authorization Permit Framework** to operate an LPG and Cylinder Exchange Point;

XIII **License Framework** for an LPG Bulk Distributing Company;

XIV **License Framework** for an LPG Bottling Company;

XV **License Framework** for an LPG Marketing Company License;

XVI **License Framework** for an LPG Bulk Transporter License;

XVII **License Framework** for an LPG Cylinder Transporter; and

XVIII **License Framework** for an LPG Cylinder Manufacturing and Maintenance Company License.

To address the implication on pricing, the implementation committee is developing a model for the setting of the bottling plants margin and LPG marketers' margin.
It is anticipated that the model to be adopted shall lead to a revision of the provisions on the UPPF AND PDM provisions in the price build up. A draft model has been developed to be factored in the new LPG price build-up (PBU) for the CRM: **The following**

I **Draft bottling plant margin model**

II **Revised LPG Marketers margin**

III **Revised UPPF and PDM; and**

IV **Draft PBU for CRM pilot.**

5.12.2 Phase One

Phase One of the Cylinder Recirculation Model (CRM) pilot was rolled out in the Obuasi and Adansi North distircts (Ashanti Region) and Kade and Akwatia districts (Eastern Region). The districts were selected based on an agreed selection criterion by the NPA. **These criteria included:**

01 Active refilling outlets with consistent LPG sales over the last six months;

02 Good control and traceability of cylinders;

03 Little or no potential for political interference;

04 Multiplicity of LPGMCs in the area;

05 Good LPGMC relationship;

A total of ten (10) LPGMCs were selected in phase one of the pilot program:

GHANA GAS GHANA NATIONAL GAS COMPANY	ENGEN	MANBAH®	alivegas SERVICES LTD.	acl Andev Company Limited Asuom & Kade
GOIL Good energy in Obuasi district	CROWN PETROLEUM in Adansi North district	TRINITY OIL	DA Oil in Akwatia	SO Energy

For Phase one of the CRM pilot in Kade and Obuasi, 38,472 newly-branded cylinders in 3kg, 6kg and 14.5kg sizes were procured from Ghana Cylinder Manufacturing Company (GCMC) by the NPA. The breakdown of the various cylinders produced are presented below:

Table 12: Pilot of CRM

1	Kade/Akwatia	15,018
2	Obuasi/Adansi North	23,454
Total cylinders procured for phase 1 pilot		38,472

5.12.3 Cylinder Recall

A cylinder recall exercise was undertaken in the pilot areas, to remove existing, unbranded cylinders to be replaced with branded cylinders. As part of the recall process, 26,173 cylinders in various sizes were recalled by the pilot LPGMCs. The recalled cylinders, as detailed below, were transported to GCMC for assessment and refurbishment. These rebranded cylinders will be sent to augment the CRM pilot programme.

Table 13: Recalled Cylinder in Pilot Areas

Pilot District	19kg	14.5kg	12kg	6kg	3kg	Total
Obuasi	2	6,248	235	9,395	817	16,697
Kade	0	4,780	0	4,188	508	9,476
Total	2	11,028	235	13,583	1,325	26,173

Challenges

The implementation of the CRM pilot faced some challenges which included:

SHORTAGE
of branded cylinders across all outlets which has led to some outlets refilling old unbranded cylinders.

LACK
of interest in 3kg branded cylinders contrary to expectation of high consumer preference for 3kg cylinders.

UNWILLINGNESS
of Customers with new cylinders to exchange them for branded ones due to the perception that the new branded cylinders may be of inferior quality.

NON-ADHERENCE
to the cylinder exchange guidelines; This has resulted in the continuous use of improvised parts of the LPG Refilling Plant as exchange points by the operators/dealers.

THE MAKESHIFT
exchange points at the LPG Refilling Plants do not meet the required distances of 10m away from the cylinder filling point (CFP) and 15m away from the LPG. vessel as stated in the CRM Pilot implementation operational guidelines.

THE ISSUE
of filling cylinder in bits (not to their full capacity) was prevalent at some pilot outlets in Obuasi and Adansi North as customers were unable to pay the full cost of filling 6kg and 14.5kg cylinders.

The challenges highlighted show a lack of thorough understanding by consumers in the pilot areas about the cylinder recirculation model. It is imperative that NPA intensifies its public education nationwide to assuage concerns of consumers.

5.12.4 Phase Two (2)

The Jomoro and Yendi districts in the Western and Northern regions, respectively, have been earmarked for phase two (2). The second phase of the CRM Pilot was launched on 17th July and 6th August 2020 in Yendi and Jomoro, respectively, with seven (7) LPGMCs involved in the exercise, namely: Go-gas and Frimps in the Yendi Municipality; Andev, Manbah Gas, Superior Oil, Anasset and Quantum Petroleum in Jomoro. It is expected that lessons learnt from the implementation of Phase 1 will be adopted to ensure Phase two of the CRM is efficient.

Strategies adopted to prevent challenges observed during the Phase 1 of the CRM include the addition of a 50% buffer to the estimated cylinders of Phase 2 Pilot LPGMCs instead of the 20% buffer used for Phase 1 Pilot LPGMCs. A total of 7,998 cylinders have been procured for the CRM pilot in the Jomoro and Yendi districts.

Table 14: Cylinders procured for CRM.

Number	Pilot Districts	Allocated Branded Cylinders
1	Yendi	1,825
2	Jomoro	3,983
3	**Obuasi (Thomhcof Energy)**	2,189
	Total cylinders procured for phase 2 pilot	**7,998**

Figure 21: Ribbon-cutting to commence CRM pilot in Kade.

Figure 22: Chief and traditional leaders of Kade at the launch.

Figure 23: Cross-section of attendants at Obuasi launch of CRM.

Figure 24: Ribbon-cutting to officially commence CRM in Obuasi.

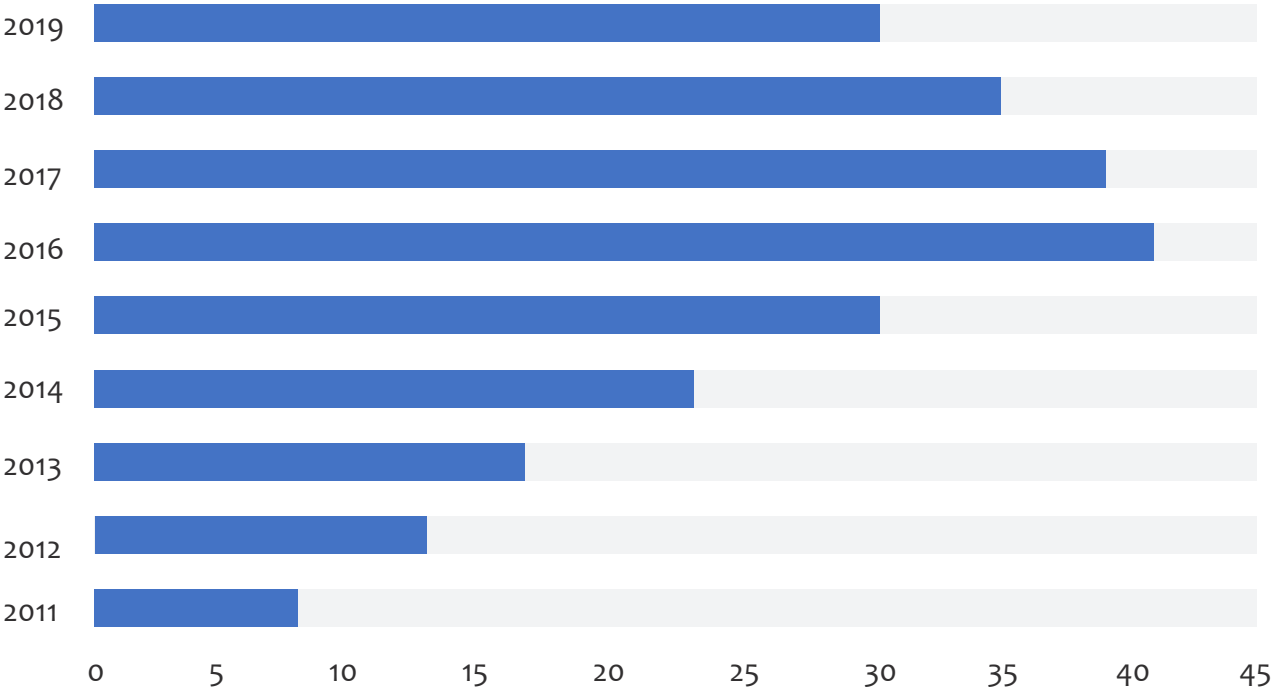
Strategies adopted to prevent challenges observed during the Phase 1 of the CRM include the addition of a 50% buffer to the estimated cylinders of Phase 2 Pilot LPGMCs instead of the 20% buffer used for Phase 1 Pilot LPGMCs. A total of 7,998 cylinders have been procured for the CRM pilot in the Jomoro and Yendi districts.

5.13 Licensing

BDCs

For the year under review, the number of BDC licenses stood at 30, 11 less than the peak (41) in 2016. In 2019, (5) five companies had their licenses revoked. They were L.I.B. Ghana Ltd., Imperial Energy Ltd, Mimshach Energy Ltd., Richelle Energy Ltd., WI Energy Ltd. The revocation of the licenses was as a result of the companies' failure to fully satisfy their financial obligations (license fees) to the NPA.

Figure 25: Number of BDCs (2011-2019).



The market concentration of licensees reduced with 9 BDCs importing above 100,000mt in 2019 compared to 7 in 2018. Five companies imported products above 50,000mt but below 100,000mt, while 12 BDCs accounting for 9% of total import brought in cargoes below 50,000mt. In 2019, 19 BDCs imported products above 30kt per annum as compared to the 15 BDCs in 2018.

Although the number of BDC, who imported products above 100,000mt increased from seven (7) in 2018 to nine (9) in 2019, the concentration of market actvitiy still remains with a few players.

The 80% market share controlled by the nine BDCs brings into question the commercial viability of the twelve (12) BDCs whose imports were below 50,000mt, given their operating expenses and an annual license fee of USD 400,000.

The annual BDC license fees of USD400,000 has, however, been revised downwards to USD300,000 in 2020 following negotations by the Chamber. The downward revision of the license fee is expected to provide some financial relief to BDCs and shore up their liquidty positions for their operations.

The 80% market share controlled by the nine BDCs brings into question the commercial viability of the twelve (12) BDCs whose imports were below 50,000mt, given their operating expenses and an annual license fee of USD 400,000.

Figure 26: BDC Import Activity (2019).

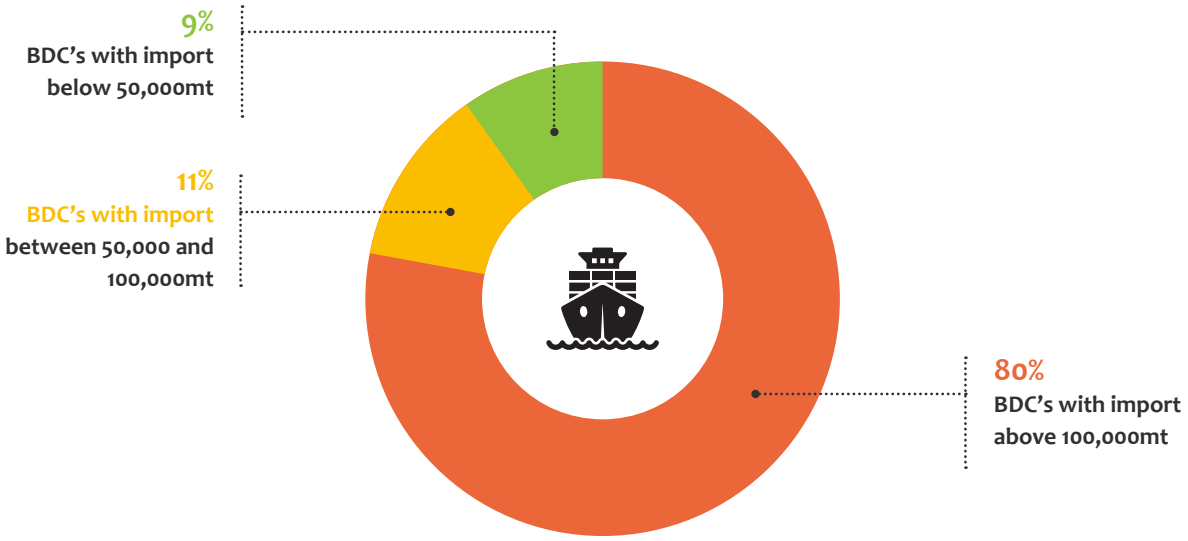
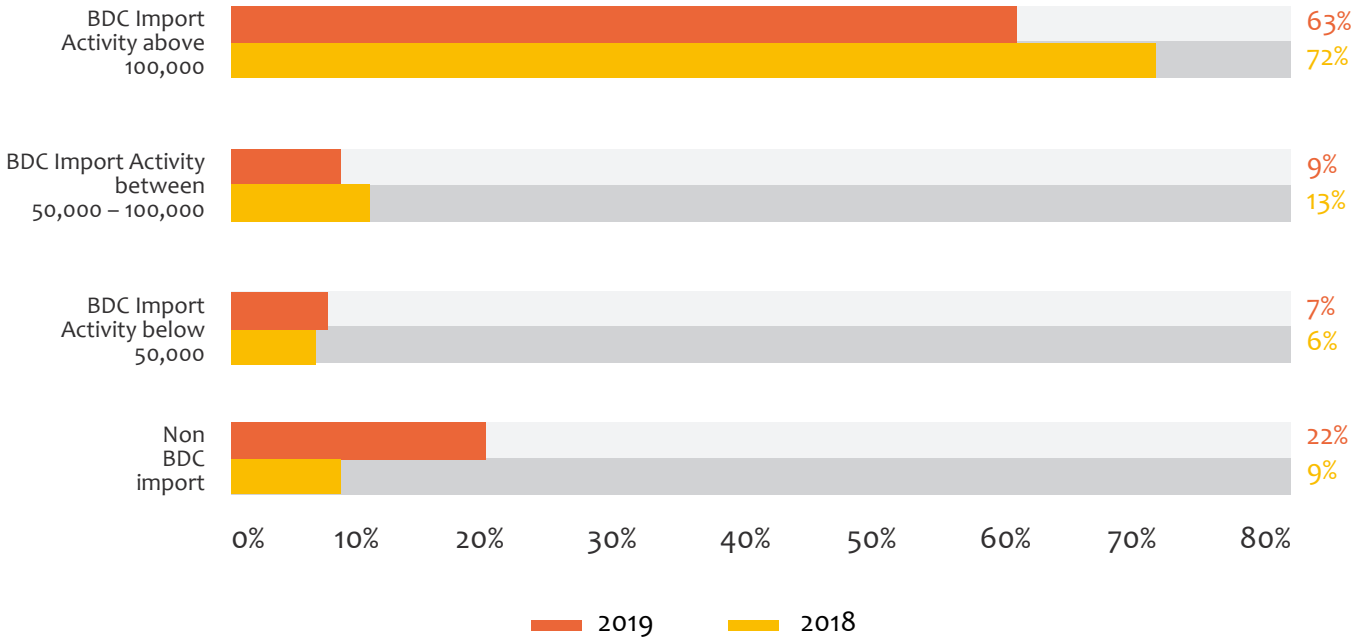


Figure 27: BDC Import volumes (2019 vrs 2018).



5.14 OMCs

The OMC license fee remained unchanged at GHS30,000 in 2019. The number of OMCs operating in the country grew to 120 in 2019, from 112 in 2018, representing a 7% increase. This follows the trend of a consistent annual growth in the number of companies since 2011. The number of retail outlets operated by these OMCs also grew to 3,055 in 2019, from 2,944 in 2018, representing a 4% increase. This also followed the same trend of consistent annual growth that has occurred since 2011.

Figure 28: Number of OMCs (2011-2019)

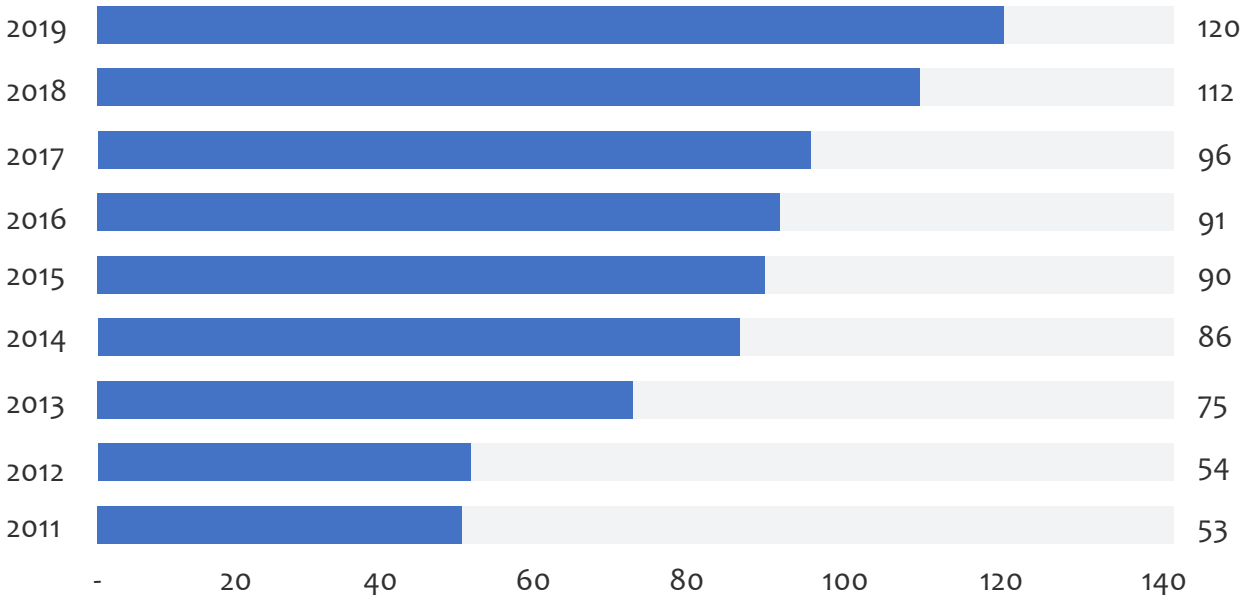
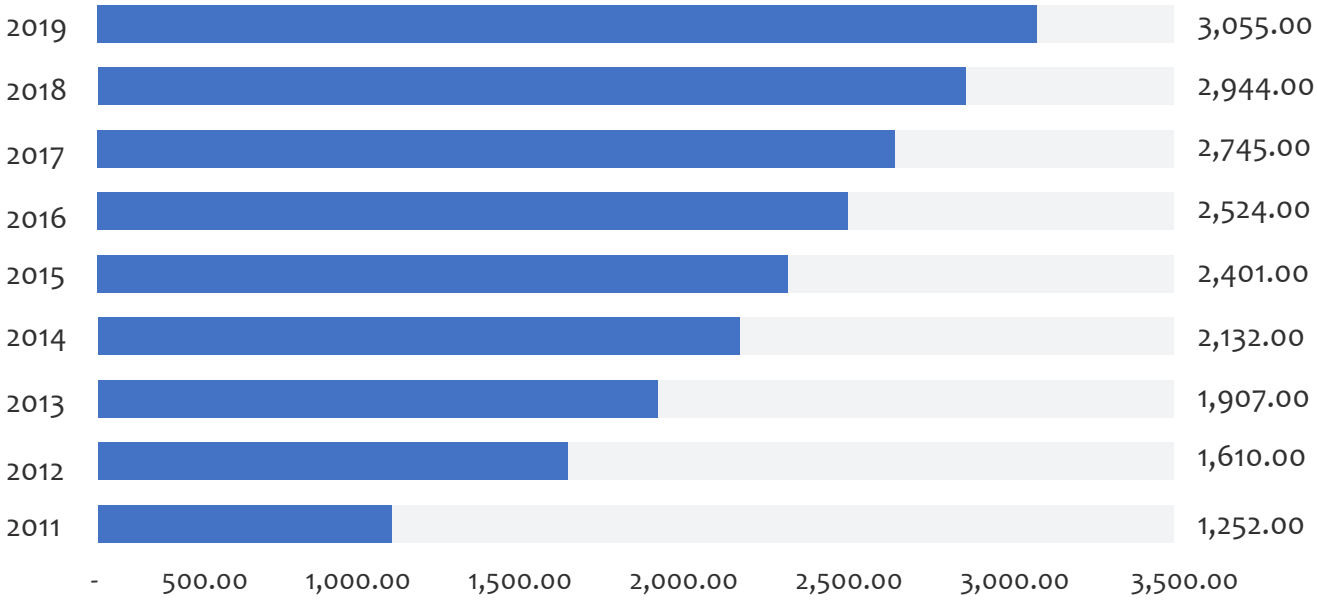


Figure 29: Number of Retail Outlets (2011-2019)

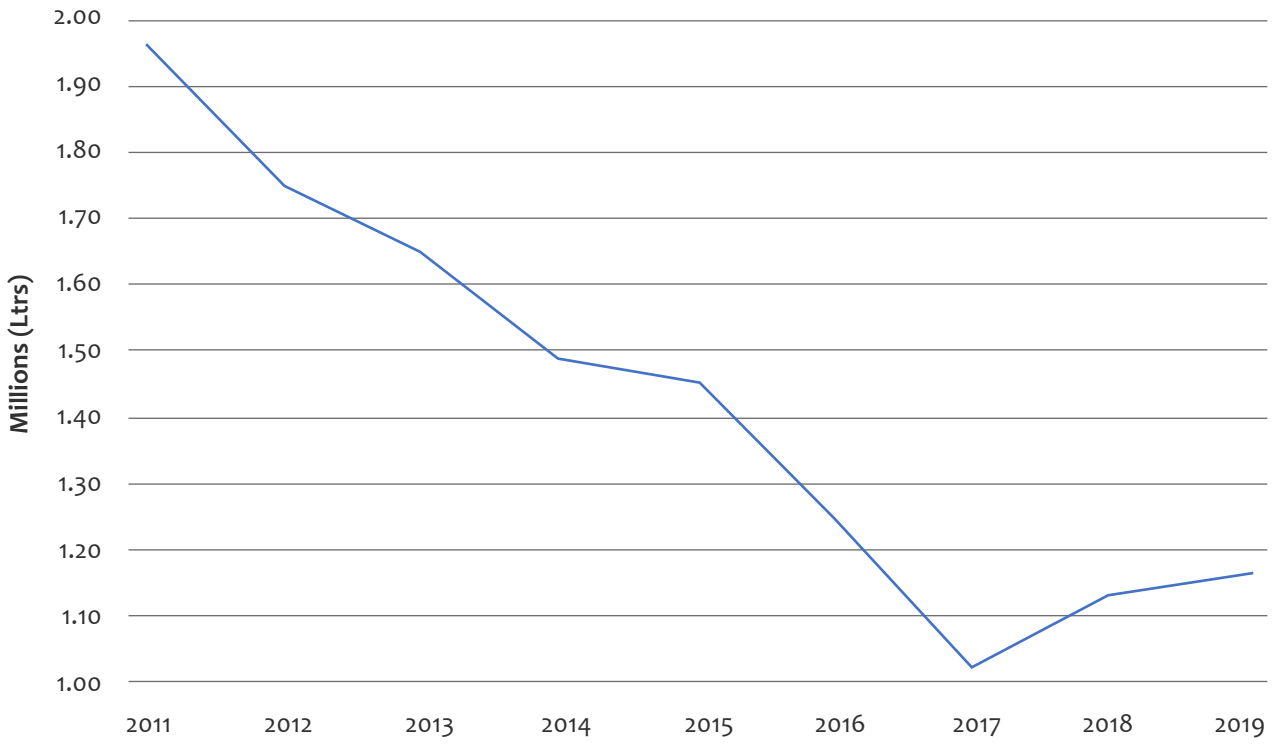


5.15 Retail Outlet Utilisation

The average annual sales for retail outlets, which is used to determine their level of productivity, rose marginally from 1.14 million litres in 2018 to 1.17 million litres in 2019, representing a 2.58% growth year-on-year. This indicated the second consecutive annual growth in the level of productivity despite the growth in the number of retail outlets and OMCs. It grew by 9.54% the previous year.

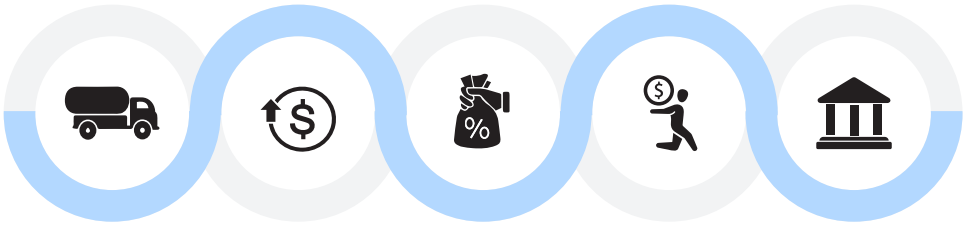
This also deviates from the consistent fall in the annual level of productivity of retail outlets observed from 2011 to 2018.

Figure 30: Annual Average Sales per Retail Outlet (2011-2019)



6.0

Financial review



BDC premiums saw an improvement for the year under review, gasoline premiums experienced a $5/mt increase from its 2018 figure of $66/mt while gasoil witnessed an increase of about 26/mt from $49/mt realised in 2018.

The year 2019 marked the worst Tax and regulatory margin loss from the petroleum illicit trade. A total GHS1.94bn was evaded through revenue under-reporting and unaccounted stocks

At the end of 2019, all principal and interest claim (RVF and FLURI) by BDCs had been validated with principal claims fully paid and a part of the validated interest paid off by government.

The outstanding BDC legacy debt of Ghs418.97mn SD75.60mn) receivable was fully settled by government on 13th January 2020 with 12-year ESLA Bonds

The cumulative total subsidies incurred by government on RFO and Premix post deregulation, 2015 to December 2019, amounts to **Ghs948.83mn USD213.08mn)**

6.1 Suppliers' Premiums

The estimated suppliers' premiums used by BDCs in computing their ex-refinery prices were extrapolated through a backward calculation from the average ex-refinery prices and the estimated exchange rates for each window. The estimated suppliers' premium used by BDCs for the year 2019 for petrol ranged between $27.27/mt and $111.41/mt, and averaged $70.70/mt. The lowest suppliers' premium was recorded in the first window of October, while the highest was recorded in the first window of January. The estimated suppliers' premium for petrol saw an increase of 104.99% throughout the 2019. The average suppliers' premium used by BDCs for the year 2019 for diesel ranged between $50.00/mt and $122.66/mt, and averaged $75.25/mt. The lowest suppliers' premium was recorded in the second window of September, while the highest was recorded in the first window of January. The estimated suppliers' premium for diesel saw a decrease of 4.47% throughout 2019. The average suppliers' premium used by BDCs for the year 2019 for LPG ranged between $145.00/mt and $260.00/mt, and averaged $221.67/mt.

The lowest suppliers' premium was recorded in the second window of October, while the highest was recorded in the second window of April, second window of June and both windows of August. The estimated suppliers' premium for diesel saw a decrease of 26.34% throughout the 2019. On a year-on-year basis, BDC premiums saw an improvement for the year under review, gasoline premiums experienced a $5/mt increase from its 2018 figure of $66/mt, while gasoil witnessed an increase of about 26/mt from $49/mt realised in 2018.

Figure 31: Average BDC Premiums 2016-2019.

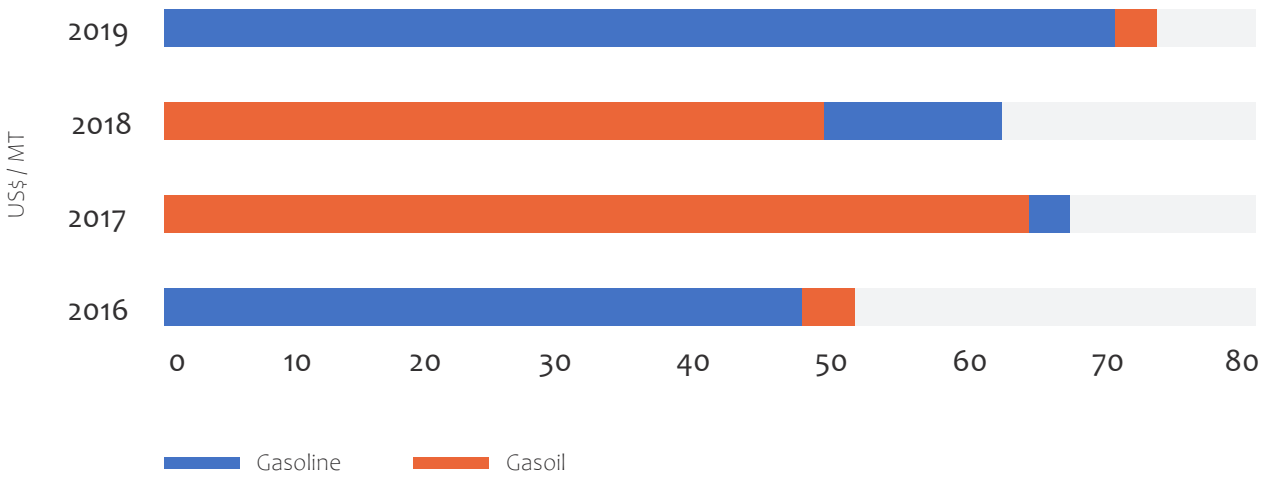
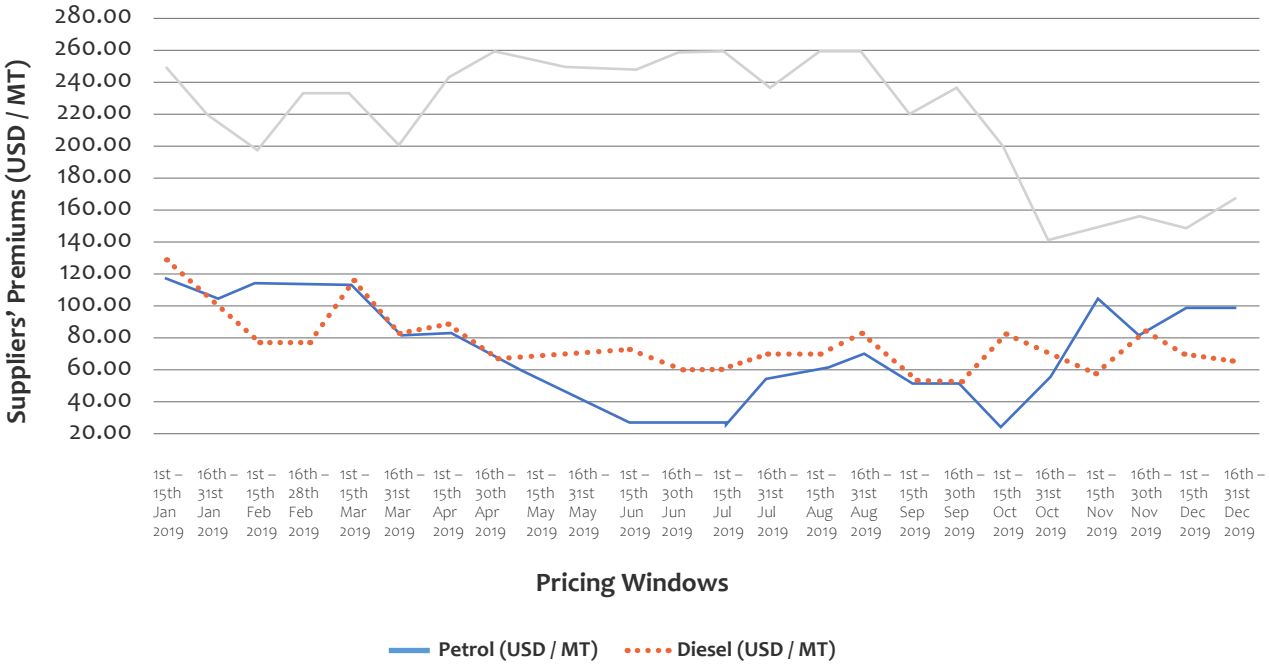


Figure 32: Trend of Suppliers' Premiums for the year 2019.



The estimated suppliers' premium used by BDCs for the year 2019 for petrol ranged between $27.27/mt and $111.41/mt, and averaged $70.70/mt. The lowest suppliers' premium was recorded in the first window of October, while the highest was recorded in the first window of January.

6.2 GoG Legacy Debt to BDCs

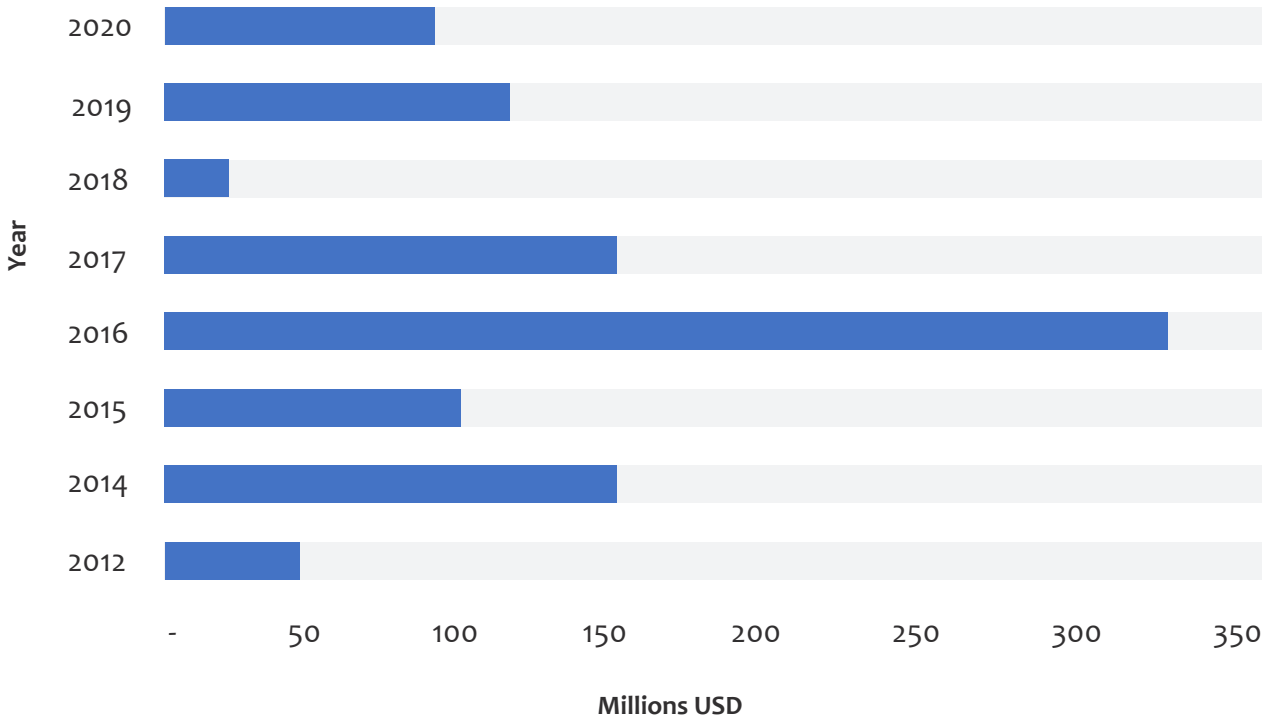
GoG indebtedness to BDCs comprise Forex Loss under-recoveries (FLUR), Price Under Recoveries (PUR), Real Value Factor (RVF) and FLUR interest (FLURI). FLUR is the foreign exchange losses arising from the NPA's application of exchange rates below market during the periods of price regulation. PUR is the price subsidy granted by government through the NPA's regulated prices. On the other hand, RVF refers to the financial cost (interest) incurred by BDCs for the delayed payments of price under-recoveries whilst FLUR Interest, refers to the financial cost borne by BDCs for the delayed payment of Forex Loss Under Recovery by government.

At the end of 2019, all principal and interest claim (RVF and FLURI) by BDCs had been validated with principal claims fully paid and a part of the validated interest paid off by government. This resulted in an outstanding BDC legacy debt of Ghs418.97mn (USD75.60mn) receivable from government. This was fully settled by government on 13th January 2020 with 12-year ESLA Bonds.

Table 15: GoG Payments of BDC Legacy Debts (2012-January 2020).

Date of Payment	Payment by	Payment Type	GHS	USD
1-Oct-2012	NPA	Cash	40,000,001	21,148,356
1-Nov-2012	MoF	Cash	38,032,833	20,070,097
1-Dec-2012	NPA	Cash	21,737,987	10,533,502
1-Jun-2014	BoG	Cash	434,784,919	150,000,000
20-Apr-2015	MoF	Cash	50,000,000	13,073,171
29-Jul-2015	MoF	Cash	195,964,032	56,587,939
16-Oct-2015	MoF	Cash	117,408,563	32,859,939
1-Jan-2016	MoF	Cash	292,929,293	74,862,206
15-Nov-2016	MoF	Cash	124,000,000	31,000,000
23-Dec-2016	BoG	BoG Bonds	900,000,000	219,077,753
10-Jan-2017	MoF	Cash	47,000,000	11,000,070
1-Nov-2017	MoF	ESLA Bonds	542,124,026	122,824,783
9-Nov-2017	MoF	ESLA Bonds	77,356,872	17,526,139
3-Sep-2018	NPA/MoF	Cash	121,466,012	25,684,262
28-Jun-2019	MoF	ESLA Bonds	648,928,861	123,332,990
13-Jan-2020	MoF	ESLA Bonds	418,969,716	75,597,646
			4,070,703,115	**1,005,178,854**

Figure 33: GoG Payments of BDC Legacy Debts (2012-2020)

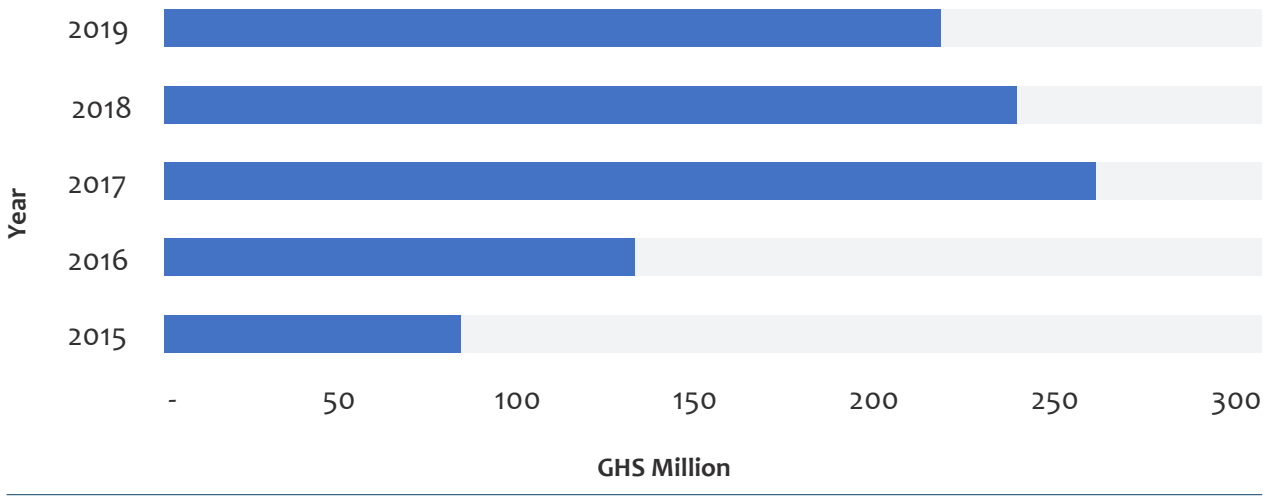


6.3 Petroleum Product Subsidies (RFO and Premix)

In 2019, Government accrued Ghs225.41mn (USD43.19mn) in price subsidies on premix and residual fuel oil (RFO) which remain price regulated and subsidised by government. This was about 16% higher than the 2018 position of Ghs194.37mn (USD42.34mn).

The cumulative total subsidies incurred by government on these products post-deregulation, 2015 to December 2019, amounts to Ghs948.83mn (USD213.08mn).

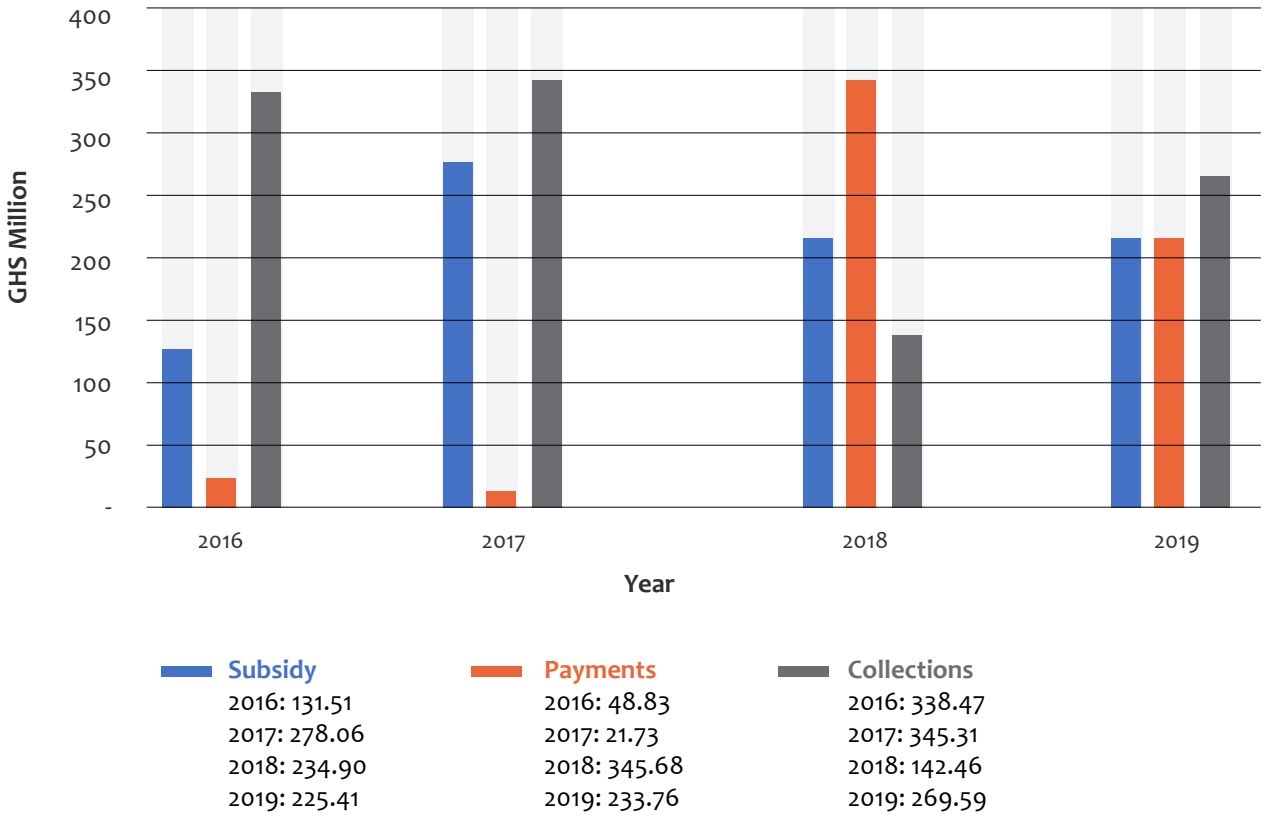
Figure 34: Premix and RFO Subsidies Post Deregulation (July 2015 - December 2019).



6.3.1 The PSRA account

The Price Stabilisation and Recovery Levy, as established under the ESLA (Act899), is, among other things, to be used to fund price under-recoveries accrued from premix and RFO subsidies.

Figure 35: PSRL Collections, Premix and RFO Subsidy Payments and Accruals (2016-2019).



Source: Annual Reports on the Management of Energy Sector Levies and Accounts (MoF), NPA.

The PSRA account opened the year with a favourable balance of Ghs326.60mn. Actual collections and lodgement on the account amounted to Ghs269.59mn against a budget of GhsGhs450.65mn according to the ESLA report issued by the Ministry of Finance. The shortfall was due to the withdrawal of the PSRL in the first and second quarters of 2019. Ghs233.76mn was spent in 2019 on Premix and RFO subsidies.

The subsidies incurred in 2019 brings total subsidies incurred by government to USD3.15bn since 2008. This comprises FLUR, FLURI, PUR and RVF for the period 2008 to 2019. *(See Appendix 4.)*

In 2019, Government accrued Ghs225.41mn (USD43.19mn) in price subsidies on premix and residual fuel oil (RFO) which remain price regulated and subsidised by government.

Figure 36: Petroleum Subsidies incurred by GoG (2008-2019).

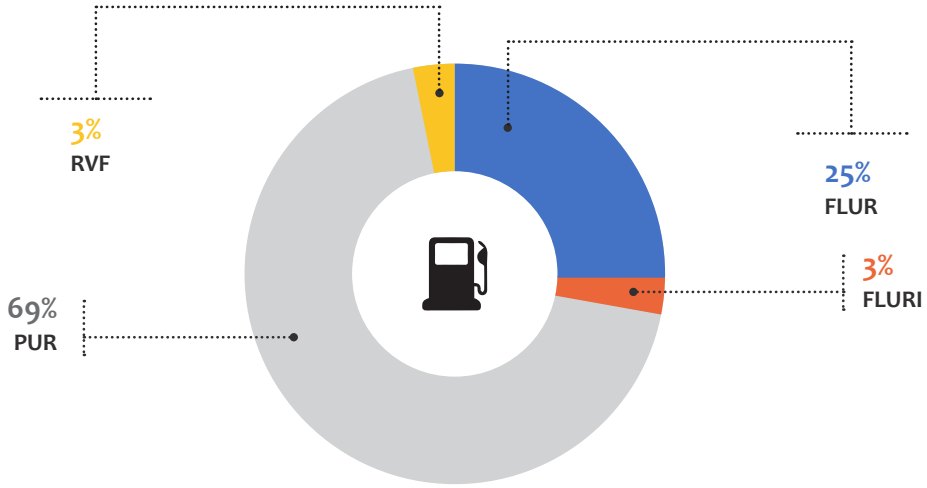
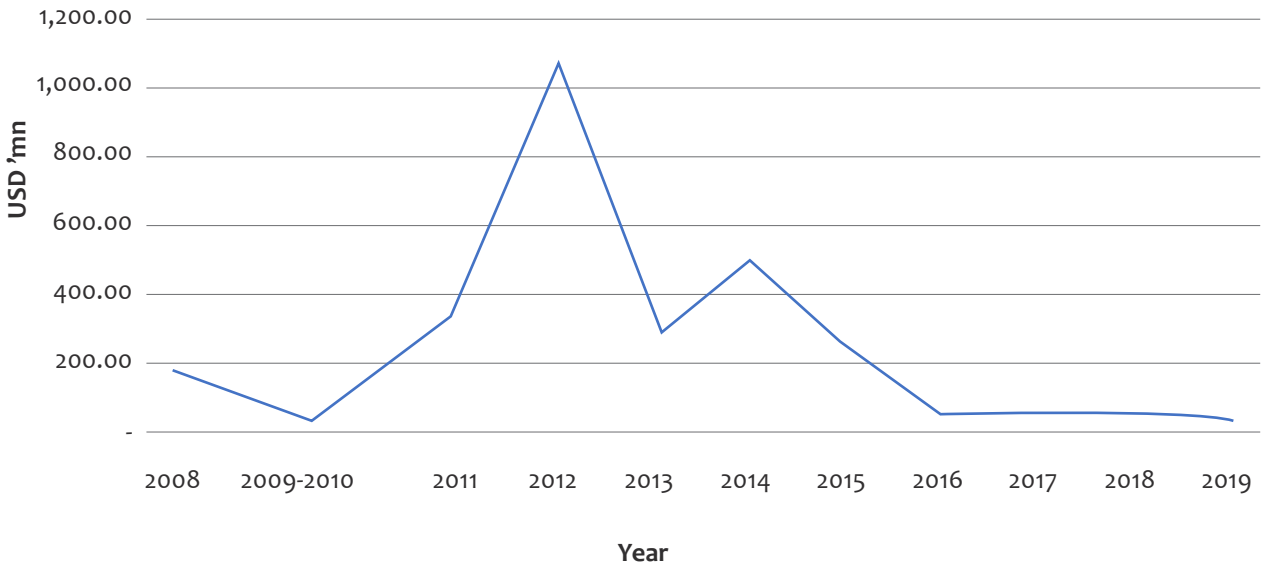


Figure 37: Petroleum Subsidies incurred by government per annum (2008-2019).



6.4 Trade Finance within the Downstream Sector

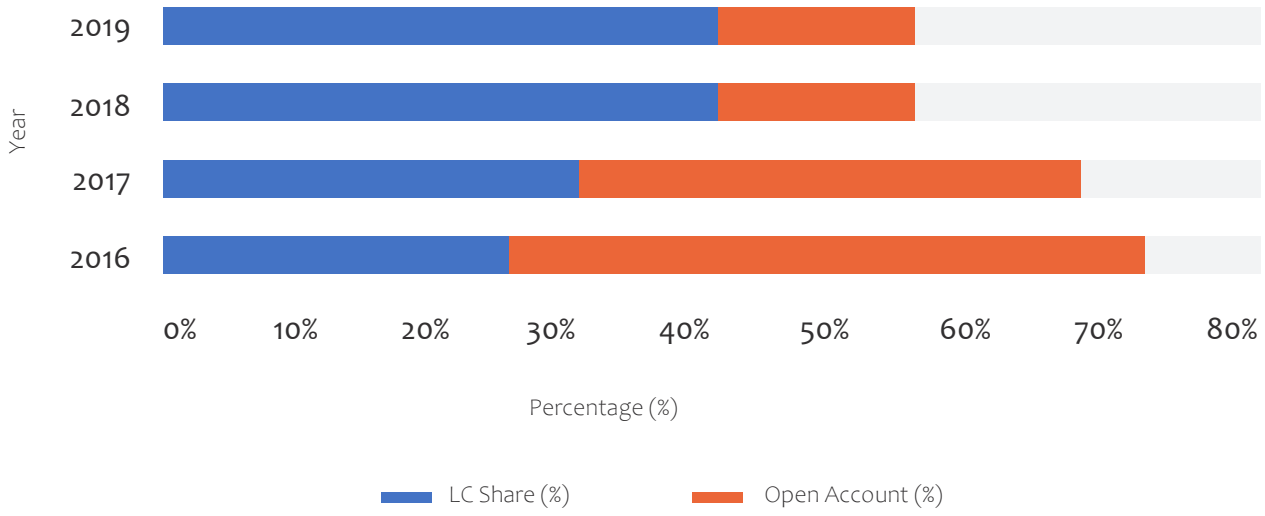
Ghana's oil import bill for 2019 saw a 19% reduction in 2019 from Ghs2,580.90mn in 2018 to Ghs2,076.30mn in 2019, although total volume traded increased by approximately 4%.

The banking sector maintained its support to the sector by financing 42% of BDC trades in 2019 as was the case in 2018 with the remaining trade financing gap covered by International Oil Traders (IOTCs) who traded with BDCs on open account or on unsecured credit basis.

6.4.1 Bank Finance (LC) vrs Open Account

Total trade funded through open account reduced by 24% in 2019 from USD1,489.39mn in 2018 to USD879.15mn, although the ratio of open account trade finance to bank financing remained the same at 42% to 58%.

Figure 38: Bank Finance (LC) VS Open Account

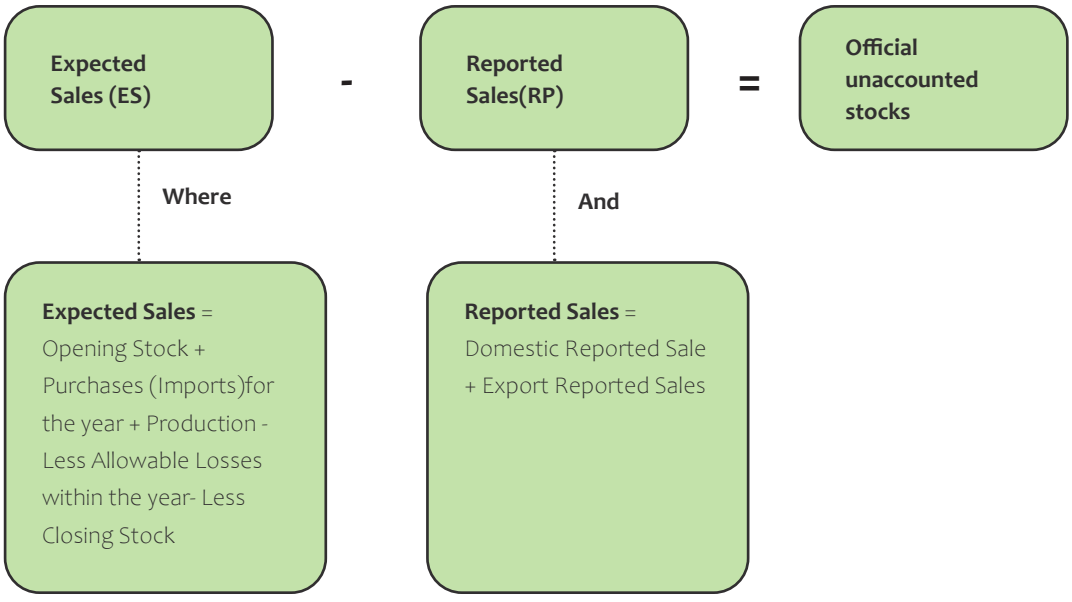


6.5 Stock Accounting in the Sector

6.5.1 National Stock Reconciliation

Product stocks of the country comprise of Fuel oil, Gas oil, Unified, Kerosene, LPG, Premium, Premix and ATK. These are either imported as finished products or produced by the local refineries. Taxes on the sale of these products accounted for about 12% of total national tax revenue in 2019. This underscores its significance to Government's fiscal policy and the need to monitor stock movement and accounting to ensure the optimisation of the national tax policy.

In accounting for stock movements, this report considers the following elements as depicted in the formula below, Opening Stock positions, Stock Inflows (Imports and Production), Closing Stock, Domestic Reported sales and Exports and provisions for operational losses.

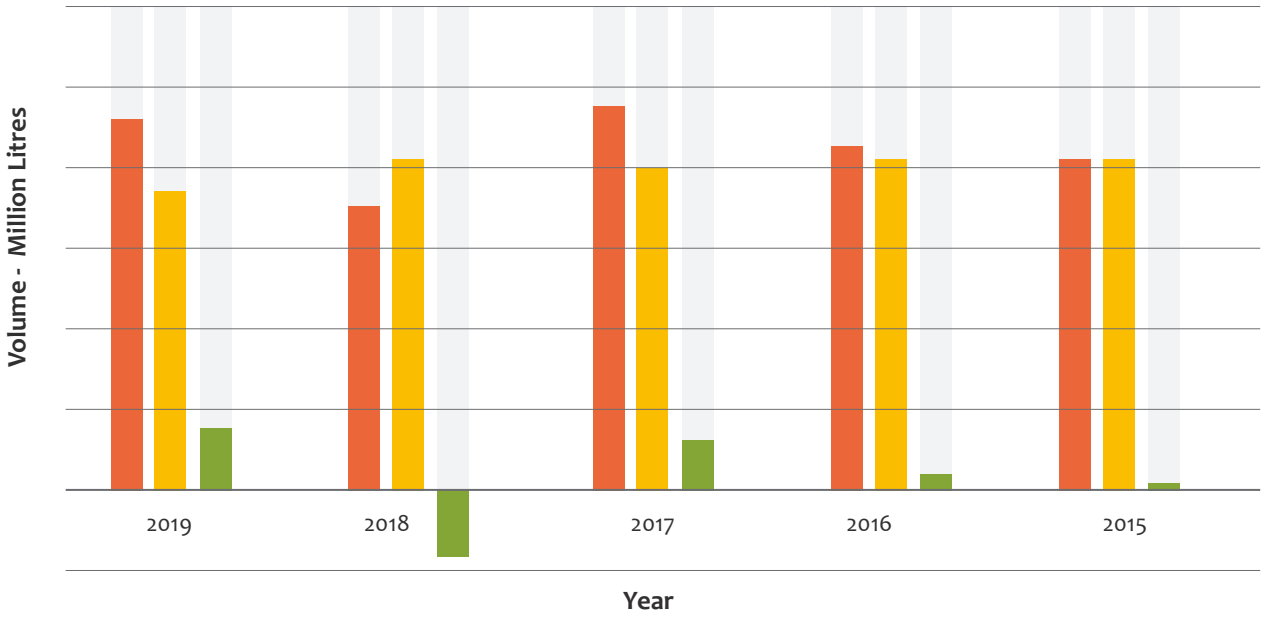


The analysis develops an expectation of sales in line with stock accounting principles after adjusting for operating losses, where applicable, and compares it with officially reported sales (domestic and exports).

An analysis of the 2019 position using official records of the NPA revealed that 855mn litres of stocks delivered into the country were not accounted for and may have evaded Ghana's tax regime. The value of taxes and regulatory margins lost on these unaccounted stocks is estimated at GHS1,460.73mn. This makes 2019 the year with the highest record of unaccountable stocks in value and volume *(see Figures 39 and 40)*. It further erodes that gains made in 2018 by efforts to eradicate the smuggling of products in and out of tank farms which are considered custom bonded warehouses. Unlike 2015 to 2017, the year 2018, saw the reported sales outstrip the expected sales by 574mn litres.

A review of this rear occurrence indicated the products may have been smuggled into tank farms but forced to be sold legitimately as a result of increased regulatory interventions and monitoring during the period.

Figure 39: Expected vs Actual sales and Variances.



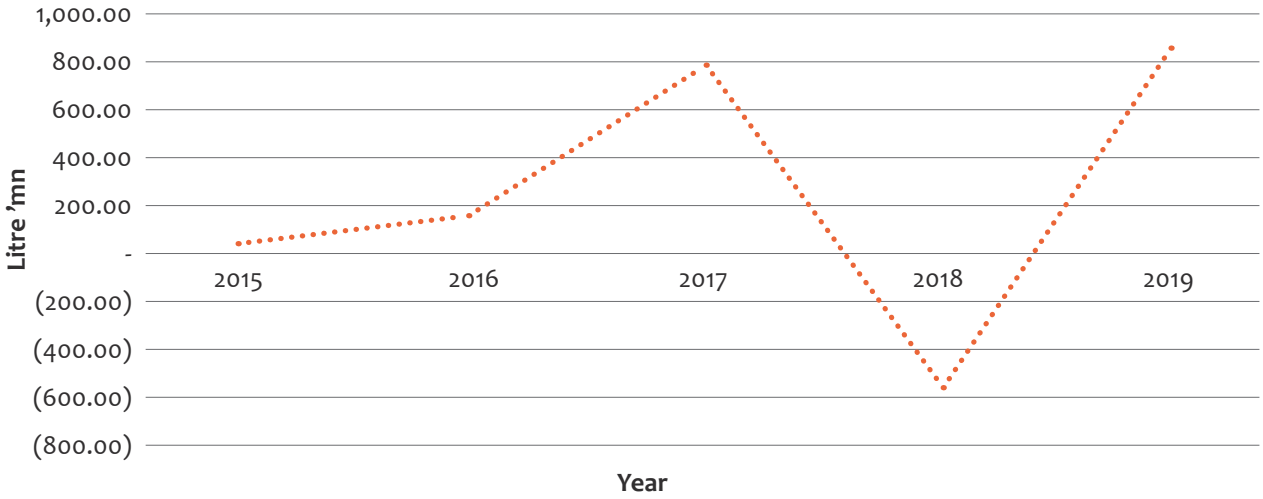
Expected Sales
2015: 4,039
2016: 4,330
2017: 4,741
2018: 3,466
2019: 4,611.29

Actual Sales
2015: 3,996
2016: 4,174
2017: 3,949
2018: 4,040
2019: 3,756.101149

Variance
2015: 43
2016: 156
2017: 782
2018: (574)
2019: 855

An analysis of the 2019 position using official records of the NPA revealed that 855mn litres of stocks delivered into the country were not accounted for and may have evaded Ghana's tax regime. The value of taxes and regulatory margins lost on these unaccounted stocks is estimated at GHS1,460.73mn.

Figure 40: Growth in Official Unaccounted Stocks (2015-2019).



6.6 Petroleum Taxes

Petroleum taxes are charges levied on the sale of petrol, kerosene, diesel, and fuel oil. Until recently, it comprised six levies (namely, cross subsidy levy, energy Levy, hydrocarbon exploration levy, road levy, and the Tema oil refinery debt recovery levy) and an excise tax. However, as part of its efforts to rationalise the taxes, government consolidated the levies in to four in 2016, and the following year it abolished the Excise.

The four levies are collectively referred to as the Energy Sector Levies (ESL) for the purposes of this report[211] includes Energy Debt Recovery Levy, Energy Fund Levy, Price Stabilization and Recovery Levy and Road Fund Levy. In addition to the ESL, Government in 2014 introduced the Special Petroleum Tax (SPT) .[212]

Under its current state, licenced oil-marketing companies are required to charge SPT on petrol, diesel, liquefied petroleum gas, natural gas and kerosene. The tax is charged at specific rates per litre or kilogram of the product *(see Table 16)*.

The 2019 fiscal year saw a review of some of the levies. Specifically, the Energy Debt Recovery Levy, Road Fund and Price Stabilization and Recovery Levy were revised upwards to correct for the loss in value due to currency depreciation and inflation over the years without a commensurate increase in the fixed specific-type levies in the price build-up. Following the amendment of the ESLA Act in August 2019, the levies on petrol, diesel and LPG increased marginally by GHp 0.24 and GHp 0.08, respectively.

In terms of Government revenue statistics, the Energy Fund Levy, Road Fund Levy and SPT are classified as tax revenue and this is because the levies are deposited into the 'Ghana Consolidated Fund'. Revenue collections from the Energy Debt Recovery Levy and Price Stabilization and Recovery Levy are classified as 'other revenue' and this is because they are earmarked into specific accounts other than the Consolidated Fund.

211 This is part of a broader levy called Energy Sector Levies and Accounts (ESLA) which includes Public lighting levy and National Electrification Scheme Levy.
212 The tax was introduced in 2014 at an ad valorem rate of 17.5% of the ex-depot price of petroleum products. In 2017 the rate was reduced to 15%, and in February 2018 the SPT was converted to a specific tax, reducing the effective rate to 13%.

The 2019 fiscal year saw a review of some of the levies. Specifically, the Energy Debt Recovery Levy, Road Fund and Price Stabilization and Recovery Levy were revised upwards to correct for the loss in value due to currency depreciation and inflation over the years without a commensurate increase in the fixed specific-type levies in the price build-up.

However, for the purposes of this report all taxes and levies charged on pump prices (i.e., Energy Fund Levy, Road Fund Levy, Energy Debt Recovery Levy and Price Stabilization & Recovery Levy and SPT) are considered as Petroleum Taxes. Figure 36 provides a description of the five petroleum charges in effect in Ghana in 2019.

Figure 41: Composition of Petroleum Taxes (2019).

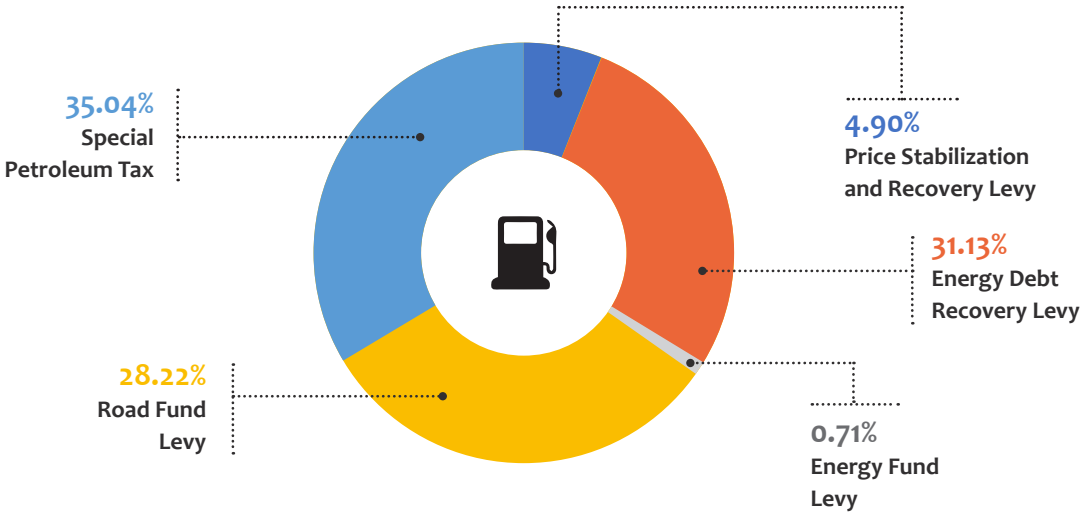


Table 16: Petroleum taxes and levies rate, 2019.

Levy	Item	Rate	Purpose
Energy Debt Recovery Levy	Petrol, diesel Marine gas oil Fuel oil Liquefied petroleum gas	GH₵ 0.49 per litre GH₵ 0.03 per litre GH₵ 0.04 per litre GH₵ 0.41 per kg	Debt recovery of Tema Oil Refinery; downstream petroleum sector foreign exchange under recoveries; boost investments in power infrastructure
Energy Fund Levy	Petrol, kerosene, diesel, fuel oil	GH₵ 0.01 per litre	Support activities of the Energy Commission Used as a buffer for under recoveries, or subsidies to stabilise petroleum prices for the consumer
Price Stabilisation and Recovery Levy	Petrol Diesel Liquefied petroleum gas	GH₵ 0.16 per litre GH₵ 0.14 per litre GH₵ 0.14 per kg	Support road maintenance
Road Fund Levy	Petrol, diesel	GH₵ 0.48 per litre	
Special Petroleum Tax	Petrol Diesel Kerosene	GH₵ 0.46 GH₵ 0.46 GH₵ 0.39	

6.7 Revenue Under-Reporting

The reported tax receipts for 2019 was GHS482.54mn less than the CBOD expected tax receipts which are computed based on official volumes procured from the NPA and adjusted by reported exemptions *(see appendix 6 for details of the computations)*.

This continued the trend of under-reported taxes observed in 2016, 2017, 2018 and 2019.

The recurrence of the under-reporting of tax receipts evidences the fact that some aspects of the illegal trade continue unabated and is supported by a well networked group of public and private officials. These observations are based on traceable official data and hence culprits of this highly corrupt and criminal acts can be significantly tracked.

The variances are reported in Tables 17, 18, 19 and 20.

Table 17: Government 2019 Petroleum Tax Collections v Expected Receipts.

Taxes (2019)	Actual Collections Ghs mn	Expected Receipts Ghs mn	Under reporting Ghs mn
ESLA	3,573.84	3,982.87	(409.03)
o/w Price Stabilisation and Recovery Levy	269.59	505.32	(235.73)
o/w Energy Debt Recovery Levy	1,712.60	1,799.37	(86.77)
o/w Energy Fund Levy	38.79	40.16	(1.37)
o/w Road Fund Levy	1,552.86	1,638.03	(85.17)
Special Petroleum Tax	1,928.00	2,001.51	(73.51)
Export Duty[213]	26.91	26.91	-
Total	**5,528.75**	**6,011.29**	**(482.54)**

Table 18: Government 2018 Petroleum Tax Collections v Expected Receipts.

Taxes (2018)	Actual Collections Ghs mn	Expected Receipts Ghs mn	Under reporting Ghs mn
ESLA	2,973.98	3,267.05	(293.07)
o/w Price Stabilisation and Recovery Levy	142.46	225.33	(82.87)
o/w Energy Debt Recovery Levy	1,471.96	1,480.13	(8.17)
o/w Energy Fund Levy	35.27	39.52	(4.25)
o/w Road Fund Levy	1,324.29	1,522.08	(197.78)
Special Petroleum Tax	1,812.01	1,952.69	(140.68)
Export Duty[216]	23.26	23.26	-
Total	**4,809.25**	**5,243.00**	**(433.75)**

213 Excise duty and Export Duty were computed using NPA's 2017 OMC Performance Statistics. Government actuals not available at the time of publication.
214 Refer to footnote 4.

Table 19: Government 2017 Petroleum Tax Collections v Expected Receipts.

Taxes (2017)	Actual Collections Ghs mn	Expected Receipts Ghs mn	Under reporting Ghs mn
ESLA	2,820.95	3,066.49	(245.54)
o/w Price Stabilisation and Recovery Levy	345.31	392.32	(47.01)
o/w Energy Debt Recovery Levy	1,293.03	1,295.09	(2.06)
o/w Energy Fund Levy	30.65	34.97	(4.32)
o/w Road Fund Levy	1,151.96	1,344.11	(192.15)
Special Petroleum Tax	1,582.12	1,731.02	(148.90)
Export Duty[215]	18.19	18.19	-
Excise Duty[216]	15.26	15.26	-
Total	**4,436.52**	**4,830.97**	**(394.44)**

Table 20: Government 2016 Petroleum Tax Collections v Expected Receipts.

Taxes (2019)	Actual Collections Ghs mn	Expected Receipts Ghs mn	Under reporting Ghs mn
ESLA	2,853.67	3,193.80	(340.13)
o/w Price Stabilisation and Recovery Levy	338.47	403.29	(64.82)
o/w Energy Debt Recovery Levy	1,281.18	1,370.29	(89.11)
o/w Energy Fund Levy	29.84	34.86	(5.02)
o/w Road Fund Levy	1,204.18	1,385.36	(181.18)
Special Petroleum Tax	1,607.42	1,607.42	-
Excise Duty[217]	14.44	14.44	-
Total	**4,475.53**	**4,815.66**	**(340.13)**

215 Refer to footnote 4.
216 Refer to footnote 4.
217 Refer to footnote 4.

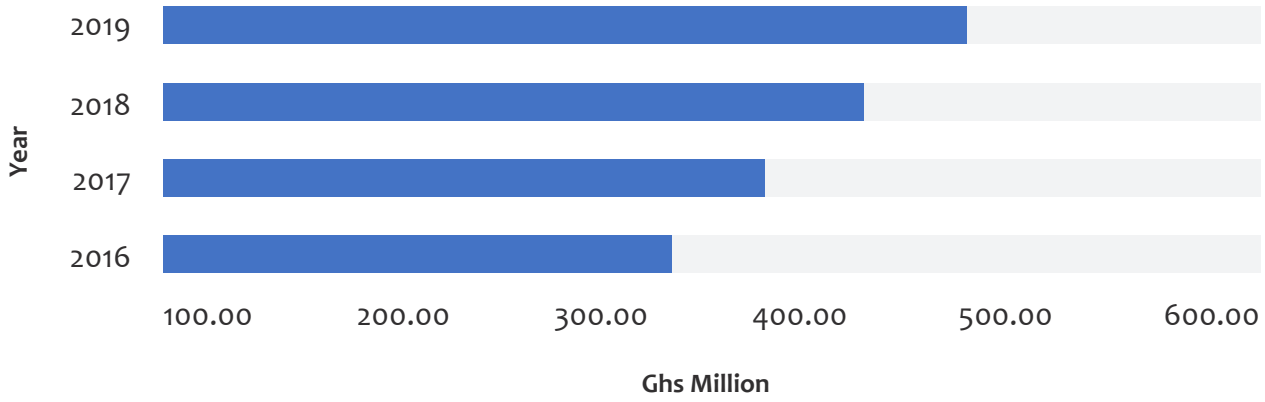
6.7.1 Petroleum Tax Revenue Shortfall Movement

The unexplained variances between the expected tax receipts and actual tax receipts grew by 11% in 2019 compared to 2018. As can be observed in Fig. 40, under-reported taxes have seen a continuous growth since 2016.

This, coupled with the growth in unaccounted stocks in 2019, presents a major cause of concern for government revenue and national security.

The growth of such a huge underground economy and the bleed to the fiscal purse is a danger to Ghana's pursuit of a country without aid.

Figure 42: Under Reported Petroleum Tax Revenue



6.8 Energy Sector Levies

The Minister of Finance reported to parliament that an amount of GHS3,573.84mn was realised in ESLA receipts for 2019. This excludes Public Lighting Levy and National Electrification Scheme Levy which are tax components of ESLA chargeable on power consumption and not petroleum products.

This position is at variance with computed ESLA receipts earned, based on NPA confirmed 2019 OMC performance data less exemptions and downward variations, which indicates that Ghs3,982.87mn should have been collected.

The reported shortfall in government's reported ESLA receipt was GHS409.03mn for 2019 after adjusting for exemptions *(see Table 17)*. This situation is worse than the variances recorded in 2016, 2017 and 2018, respectively.

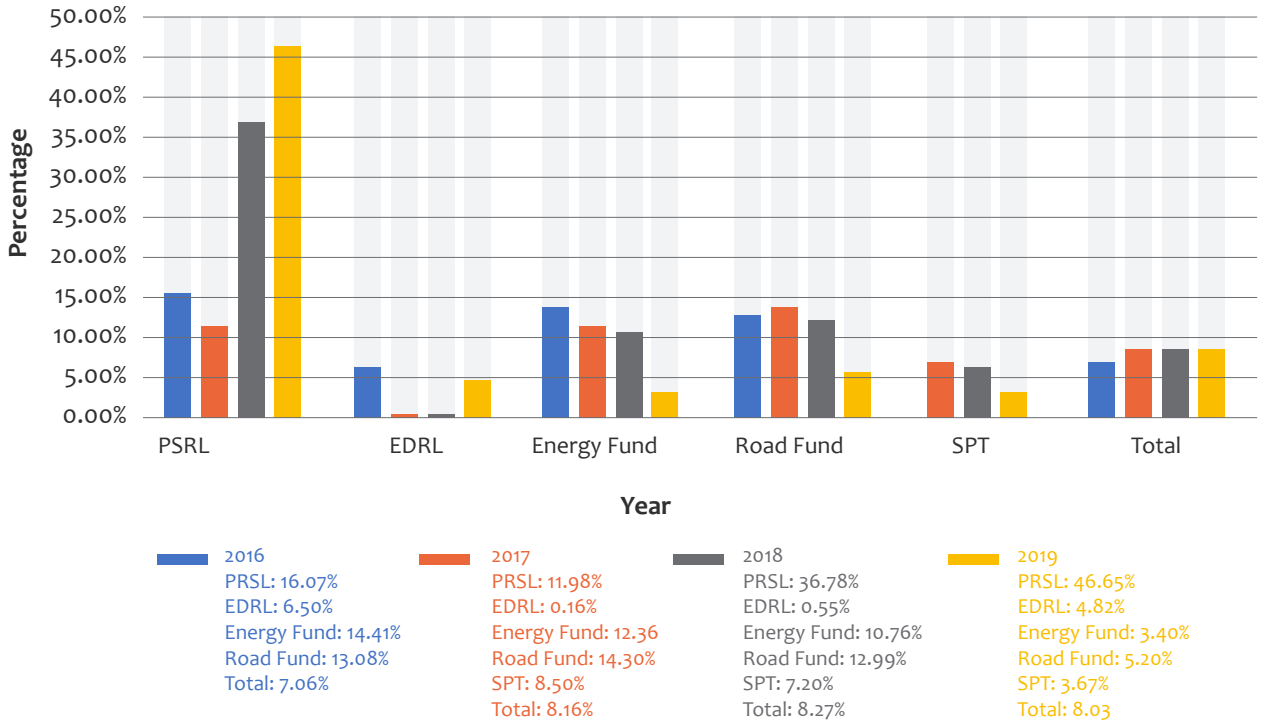
Further analysis of the variance shows that the under reported taxes for the PSRL when compared to the expected receipts was 47% in 2019, whilst EDRL and Road Fund reported a shortfall of 5%, respectively.

The observations in the various elements of ESLA is of a major concern and requires committed and honest policy interventions to reverse the tide.

The variance analysis is reported in Table 17 to 20. *Kindly refer to appendix 5 to 8* for the detailed computation of the CBOD position.

The unexplained variances between the expected tax receipts and actual tax receipts grew by 11% in 2019 compared to 2018.

Figure 43: Percentage of Taxes Under-Reported.



6.8.2 Special Petroleum Tax

In 2019, collections for SPT amounted to Ghs1,928.05mn compared to Ghs1,812.01mn collected in 2018. This represents a nominal growth of 6.40% over the reported SPT for 2018 which is lower than the growth rate of 14.53% recorded in 2018. SPT share of the total downstream petroleum taxes reduced to 35% from 38% in 2018.

The reported SPT collections above is also at variance with the expected SPT value recomputed by the CBOD by Ghs73.51mn.

The variance analysis is captured in tables 17, 18, 19 and 20 above.

6.8.3 Revenue Loss from Illegal Trading

Petroleum tax revenue losses to the State from the illegal trading activities are classified as either official or unofficial.

The official lost revenue has the tax base (volume of petroleum products) traceable. This is reflected in the disparity between the tax due from the official sales recorded by the NPA and the reported collections/receipts reported by the GRA. It is also reflected in the tax associated with volumes of stock that cannot be accounted for in the reconciliations of the official recorded stock movements in the country.

The unofficial losses refer to the lost tax revenue from export dumping, premix dumping and smuggling whose sales or stock movements are not officially captured as taxable. These cannot be traced from official stock data reports.

The revenue lost are also not just in taxes, but also in regulatory margins.

Table 21: Tax Revenue Loss on Official Volumes.

Year	Official Tax Loss (Unaccounted Stocks) GHSmn	Official Tax Loss (Accounted Sales) GHSmn	Total GHSmn
2015*	65.16	-	65.16
2016	221.84	340.13	561.98
2017	1,103.73	394.44	1,498.17
2018	-	433.75	433.75
2019	1,187.07	482.54	1,669.61
Total	**2,577.79**	**1,650.87**	**4,228.66**

*Official tax loss on accounted sales for 2015 not computed since there was no ESLA in 2015.

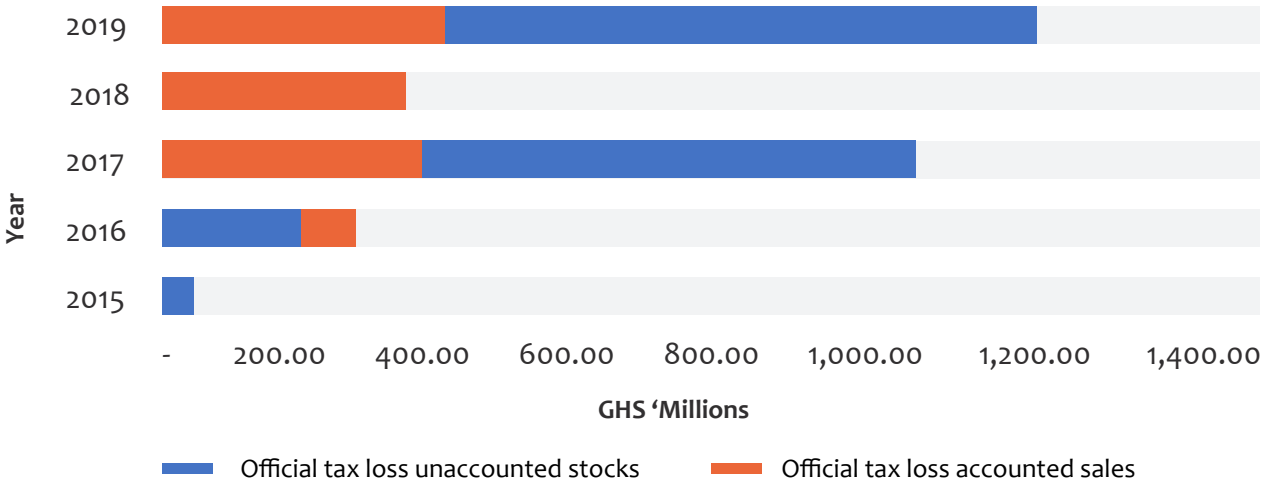
Table 22: Regulatory Margin Lost on Official Volumes.

Year	Official Tax Loss (Unaccounted Stocks) GHSmn
2015	8.36
2016	25.00
2017	198.18
2018**	-
2019	273.66
Total	**505.20**

Please see detailed computation in appendix 9 and 10

**Official tax loss on unaccounted sales for 2018 since there was no losses relating to that year.

Figure 44: Official Tax Losses (Accounted Vs Unaccounted).



6.9 Government Interventions

The Government of Ghana, through the Ministry of Finance and the GRA, commissioned an independent audit in 2020 to investigate the claim of revenue underreporting of Ghs2,790.59 relating to the period 2016 to 2018 as captured in the 2018 edition of this Report.

The work of the independent auditor is currently ongoing and expected to finalised within the first quarter of 2021.

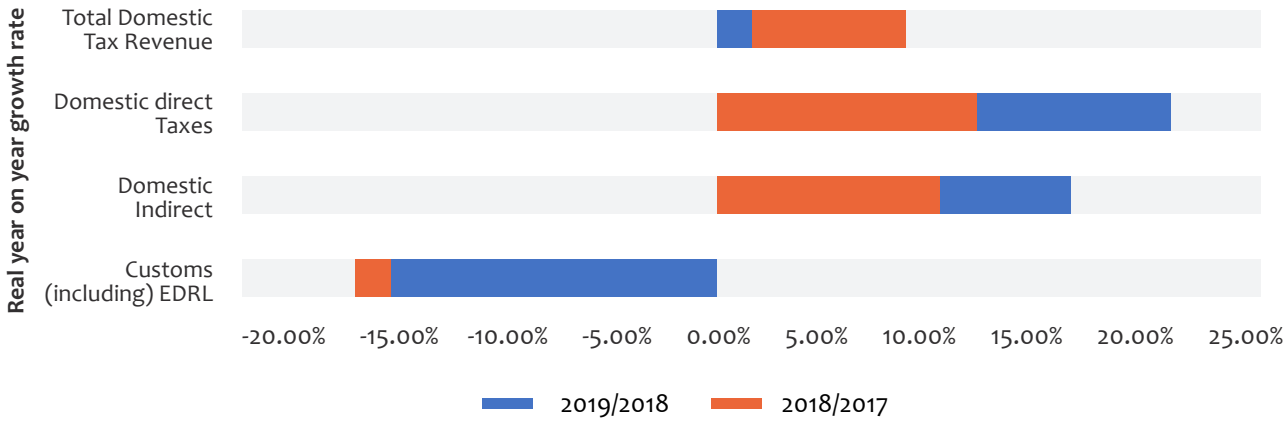
6.10 Downstream Petroleum Taxation and National Taxation

Total domestic tax revenue collections between January and December 2019 amounted to Ghs45.61bn, including the Energy Debt Recovery Levy. This figure excludes tax upstream petroleum tax receipts (royalties, surface rentals, CIT, Carried and Participating Interest and Petroleum Holding Fund Income), as this revenue is collected and accounted for separately under the Petroleum Revenue Management Act 2011 (Act 815). The 2019 total domestic tax revenue collections amount to 13.05% of non-oil gross domestic product, slightly up from the 13.03% recorded in 2018.[218]

Total domestic tax revenue in 2019 increased by 16.5% in nominal terms when compared to collections in 2018. Adjusting for inflation, total domestic tax revenue increased by 7.98% in real terms between 2018 and 2019.

218 The non-oil tax-to-GDP ratio is the ratio of non-oil tax revenue to non-oil GDP. Non-oil tax revenue excludes all receipts from upstream domestic oil production (royalties and corporate tax), and some Energy Sector levies

Figure 45: Real year-on-year growth in tax aggregates (2018-2017) and (2019-2018).



Comparing the 2019 actual tax revenue collections of Ghs45.6bn to the 2019 budget target of Ghs47.05bn, GRA recorded a below target collections of Ghs1.45bn in absolute figures or 3% in percentage terms. Table 23 provides a detailed breakdown of actual and target collections in 2019 by tax type.

Of the 18 tax types shown, only nine (Corporate tax, National Fiscal Stabilization Levy, Domestic VAT, Domestic NHIL & GETFund levy, Communication Services Tax, Special Petroleum Tax, Petroleum taxes and Energy Debt Recovery Levy) exceeded the budget target set for GRA. Corporate tax and National Fiscal Stabilization Levy were particularly strong, recording above target collections of Ghs2,557mn (27%) and Ghs101.00 million (30%), respectively.

The above target performance on downstream petroleum taxes (Ghs171mn above target) vis-a-vis the estimated under-reported taxes of Ghs482.54 suggests the GRA targets on the subsector are well below optimal. The underperformance on the total tax revenue collections of Ghs1.45bn recorded in 2019 was mainly driven by poor performance of customs taxes (except for petroleum taxes), personal income tax (PAYE), other taxes and domestic excise tax.

On the Customs side for instance, import duties and levies, Import VAT, Import NHIL, and Import GETFund levy recorded below target collections of Ghs2,138mn, Ghs1,337mn, Ghs255mn and Ghs220mn, respectively.
On the domestic front, personal income tax (PAYE) recorded the biggest collection shortfall of Ghs308mn followed by other taxes[219] (Ghs161mn).

219 This includes rent tax, management and technical service fees and tax stamps.

Table 23: Actual and target tax revenues (2019).

Tax type	Actual (Ghs'm)	Target (Ghs'm)	Dev (Ghs'm)	Dev (%)
Domestic Direct Taxes	21,838	19,790	2,049	10%
Personal Income Tax (PAYE)	7,278	7,586	(308)	(4%)
Personal Income Tax (Self-employed)	406	480	(74)	(15%)
Corporate Tax	11,913	9,355	2,557	27%
Other direct taxes	273	434	(161)	(37%)
Mineral Royalties	1,007	1,027	(21)	(2%)
Airport Tax	521	568	(46)	(8%)
National Fiscal Stabilisation Levy	441	340	101	30%
Domestic Indirect Taxes	10,032	9,741	291	3%
Domestic VAT	5,236	4,894	342	7%
Domestic NHIL	1,027	936	92	10%
Domestic GET Fund Levy	1,027	936	92	10%
Domestic Excise Tax	385	632	(247)	(39%)
Communication Services Tax	428	424	4	1%
Special Petroleum Tax	1,928	1,920	8	0%

Table 23: Actual and target tax revenues (2019) *(Continued)*

Tax type	Actual (Ghs'm)	Target (Ghs'm)	Dev (Ghs'm)	Dev (%)
Customs Taxes	12,035	15,916	(3,881)	(24%)
Import Duties and Levies	5,280	7,418	(2,138)	(29%)
Import VAT	3,693	5,030	(1,337)	(27%)
Import NHIL	705	960	(255)	(27%)
Import GET Fund Levy	739	960	(220)	(23%)
Petroleum Taxes [222]	1,618	1,550	69	4%
Total tax revenue	43,905	45,447	(1,542)	(3%)
Energy Debt Recovery Levy	1,704	1,610	94	6%
Grand total	**45,609**	**47,057**	**(1,448)**	**(3%)**

Note: Grand total = Total tax revenue + Energy Debt Recovery Levy.

6.10.1 Downstream Petroleum Tax Revenue versus Upstream Petroleum Tax Revenue

Downstream petroleum tax revenue, as reported by the Ministry of Finance (MoF) and Ghana Revenue Authority (GRA), amounted to Ghs5,528.75million (US$1,058.35million) in 2019.

This comprises ESLA receipts (Ghs3,573.84million), SPT (Ghs1,928.00million) and Export Duty (Ghs26.91million). The reported collections represent 12% of total domestic revenue[220] and 10% of total government revenue including grants.[221] Compared to 2018, 2019 downstream petroleum tax revenue recorded a growth of 15%. See Table 43. On the other hand, Revenue from the Upstream sector which involves receipts from Royalties, Corporate Income, Surface rentals, Carried and Participating Interest and Petroleum Holding Fund Income amounted to Ghs4,897.85million (US$937.58million)[222]. This represents 9% of total government revenue for the year, including grants and a decline of 4% compared with 2018. *See Figure 44.*

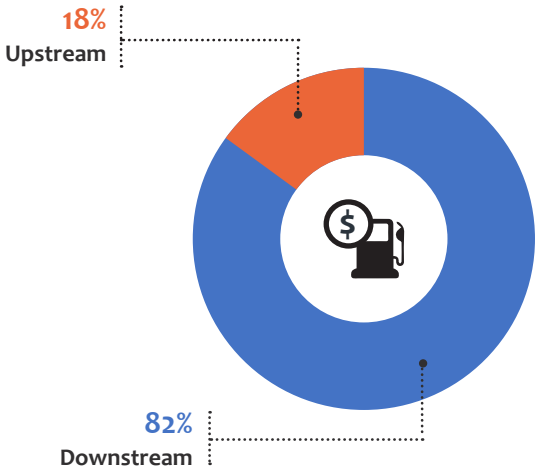
As can be observed in Figure 43, the petroleum downstream sector maintained its place as the larger contributor to government in 2019. It increased its share based on the USD valuation from 52% in 2018 to 53% in 2019.

220 This is made up of domestic direct and indirect taxes, customs taxes and EDRL.
221 Total government revenue amounted to Ghs53,379.61 million according to the MoF.
222 Annual Petroleum Reports, PIAC.

Downstream petroleum tax revenue, as reported by the Ministry of Finance (MoF) and Ghana Revenue Authority (GRA), amounted to Ghs5,528.75million (US$1,058.35million) in 2019.

Figure 46: Distribution of Petroleum Revenue (Downstream vs Upstream).

2016: Distribution of petroleum revenue



2017: Distribution of petroleum revenue

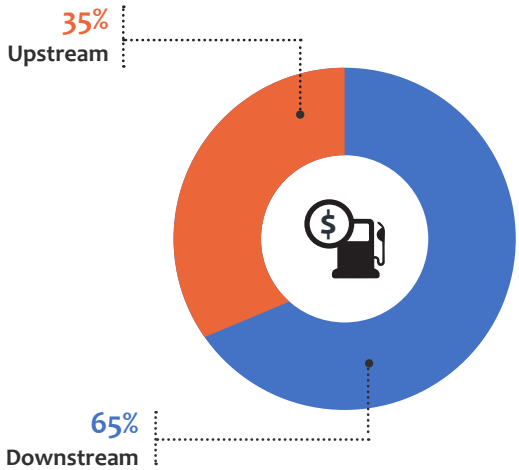
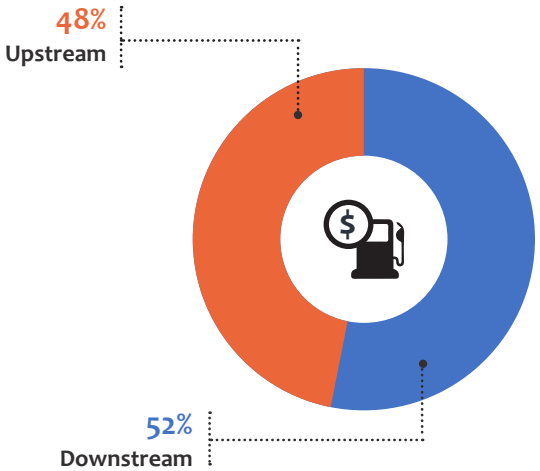
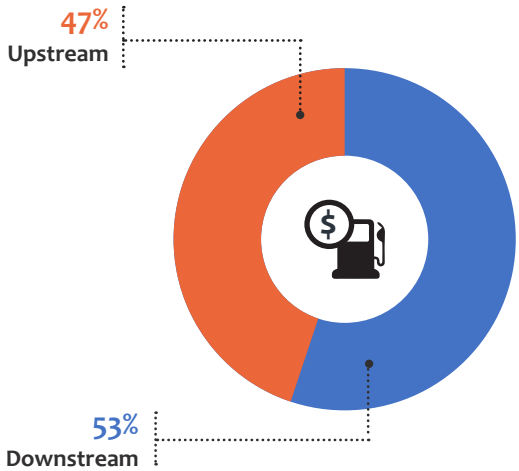


Figure 47: Distribution of Petroleum Revenue (Downstream vs Upstream).

2018: Distribution of petroleum revenue



2019: Distribution of petroleum revenue



As can be observed in Figure 43, the petroleum downstream sector maintained its place as the larger contributor to government in 2019. It increased its share based on the USD valuation from 52% in 2018 to 53% in 2019.

6.11 E.S.L.A. PLC : Investor Update

6.11.1 Executive Summary

E.S.L.A. PLC (ESLA) is a public limited liability company, established in 2017 as an independent Special Purpose Vehicle (SPV), primarily to issue debt securities to refinance energy sector debts.

It was established by the Government of Ghana (GoG) acting through the Ministry of Finance (MoF), with the National Trust Holding Company (NTHC) as its sole nominee shareholder. ESLA is managed by KPMG as the Administrator.

In 2017, ESLA successfully issued the first bonds under the Bond Programme (the Programme), Tranche E1 and Tranche E2 maturing in 2024 and 2027 respectively, and raising GHS 4.784 billion in total for the purpose indicated above. An additional GHS 880 million of Tranche E2 was also raised in 2018.

ESLA has also issued Tranche E3, a GHS 1 billion 2029 maturity bond in 2019. In January 2020, ESLA issued a 12-year bond under Tranche E4, which raised GHS 430 million and, subsequently, in March same year, a further circa GHS 1.20 billion was issued under Tranche E4 (Tranche E4-B).

The Bonds are backed by the Energy Debt Recovery Levy (EDRL) imposed under the Energy Sector Levy Act 2015. The current outstanding issuance is GHS 7.63 billion, representing a total issuance of GHS 8.294 billion, out of which GHS 664 million was redeemed in a buyback transaction financed with funds from the Lock Box account.

The outbreak of the COVID-19 pandemic in December 2019 has had detrimental impacts across the globe.

Ghana, from March 2020, has felt the socio-economic impact of the pandemic, even after a mix of fiscal and monetary measures were implemented by the GoG to curb the devastating impacts.

The three-week lock down in parts of the country, from March to April, which resulted in a large cross-section of the population (based in the Greater Accra and Ashanti regions) staying at home, reduced mobility and consequently fuel consumption.

This development directly impacted ESLA cash flows as expected with April being the hardest hit month. Nonetheless, the impact thus far on receivables remains manageable and supports current outstanding bonds under the Programme.

Furthermore, the removal of restrictions by the President has restored ESLA cash flows to previous levels and expected to improve liquidity.

6.11.2 The ESLA Bond Programme Structure

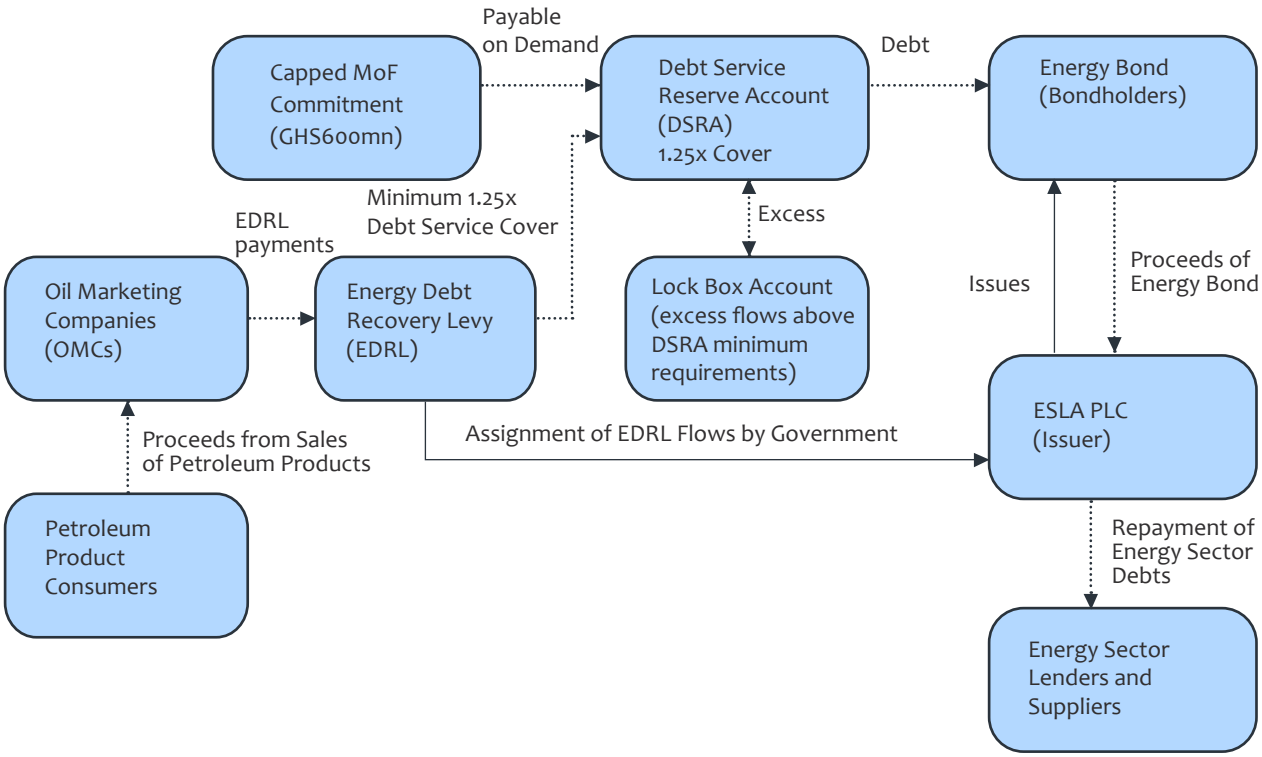
Transaction structure is simple and straightforward with buffers built-in. SPV is totally ring fenced, no cash flows back to Sponsor until bonds are fully redeemed.

The Lock Box holds excess EDRL cash flows above the minimum debt service reserve amount. Cash built up in Lock Box account can flow back to DSRA to meet any debt service shortfall.

MoF Capped Cash Commitment can be drawn on demand to support debt service funding shortfall, if any.
ESLA PLC repays energy sector lenders and suppliers directly with cash from bond proceeds.

The Bonds are backed by the Energy Debt Recovery Levy (EDRL) imposed under the Energy Sector Levy Act 2015. The current outstanding issuance is GHS 7.63 billion, representing a total issuance of GHS 8.294 billion, out of which GHS 664 million was redeemed in a buyback transaction financed with funds from the Lock Box account.

Figure 48: The ESLA Bond Programme Structure.



6.11.3 Current EDRL Collections

2019 actual EDRL collections stood at a monthly average of GHS 140.6 million. This represents 101.21% of expected collections and is above the 88.50% expected realization of projected amounts.

Excess collections for 2019 presented some cash flow robustness and supported the issuance of Tranche E4 and E4-B during the first quarter of 2020. The Lock Box holds excess EDRL cash flows above the minimum debt service reserve amount.For Jan-Oct 2020, actual EDRL collections stand at a monthly average of GHS 128.1 million.

Actual cash collections for the period represent 80.79% of expected collections. In nominal terms, monthly average EDRL collection for 2020 is lesser than that of 2019, thus far. However, data for September and October 2020 show increased collections of GHS 180.4 million and 190.7 million, respectively, above the projected average monthly collection of GHS158.6m for 2020. The increased collections witnessed in September and October 2020, is expected to continue for the rest of the in year in light of the peak election season and pending Christmas festivities, thus improve ESLA's cash flow and liquidity.

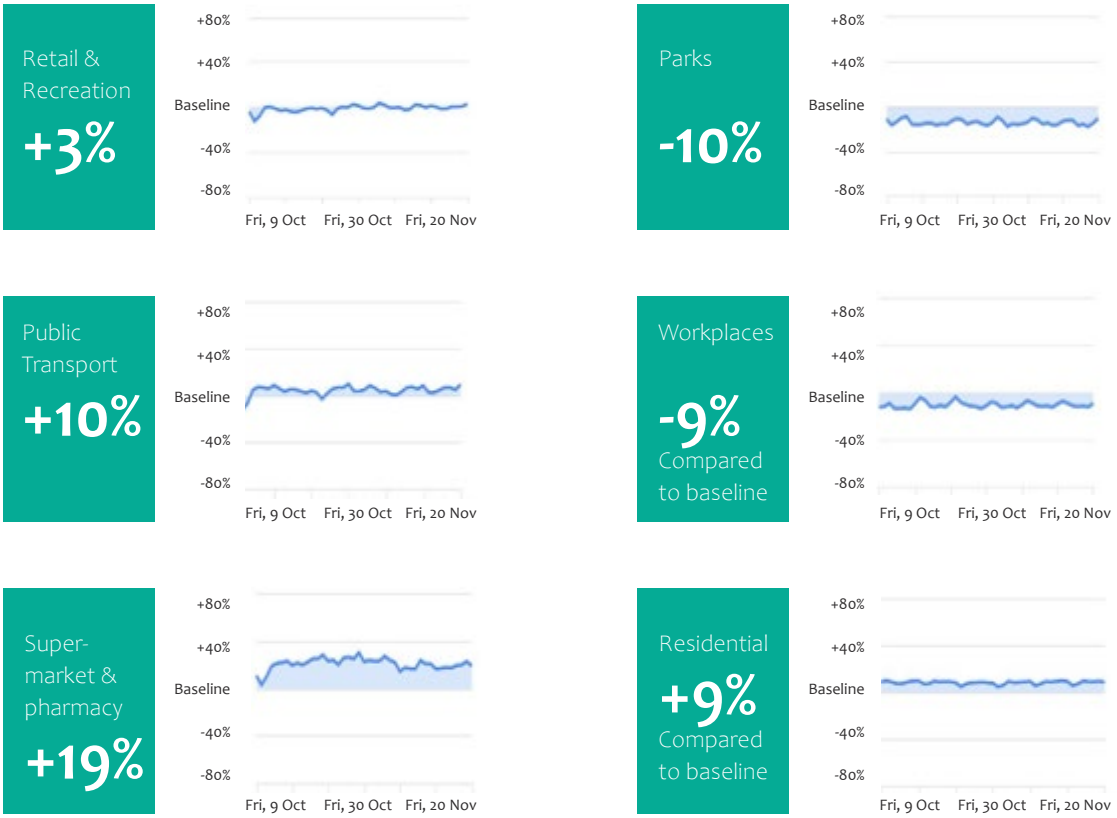
Table 24: Summary of EDRL collections for 2019-2020 (GHS' million).

	2019 (Expected)	2019 (Actual)	FY' 2020 (Expected)	Year-to-Oct 2020 (Actual)
1 Collections	1,666.34	1,687.87	1,904.53	1,281.84
2 Monthly average	138.86	140.66	158.65	128.18
3 Percentage of expected amount (%)		101.29		80.79

6.11.4 Summary of Mobility Data

Evidence of increased mobility to a variety of common locations, support the expectation of increased fuel consumption as restrictions on movements have eased.
Data from Google mobility report shows that movement as at 20th November to workplaces have improved to -9% vs. a low of -42% (on 13th April); public transport improved to +10% from -58% (on 5th April); mobility to supermarket and pharmacy shops improved to +19% vs. -44% (on 5th April).
Looking ahead, increased mobility and the resulting increase in fuel consumption should support the recovery of EDRL collections, with ESLA guaranteeing debt service for 2020.

Figure 49: Summary of EDRL collections for 2019-2020 (GHS' million)



6.11.5 Coupon Payment Track Record

ESLA PLC has, since inception, successfully settled all payment obligations to bondholders without delay.
A total of GHS 3.615 billion has been paid as interest payment for the benefit of bondholders of tranches E1 to E4 bonds. An outstanding amount of GHS 266.44 million has been transferred to the Trustee to be paid to bondholders of tranches E3 and E4 in December 2020 and January 2021.

ESLA PLC has, since inception, successfully settled all payment obligations to bondholders without delay.

A total of GHS 3.615 billion has been paid as interest payment for the benefit of bondholders of tranches E1 to E4 bonds.

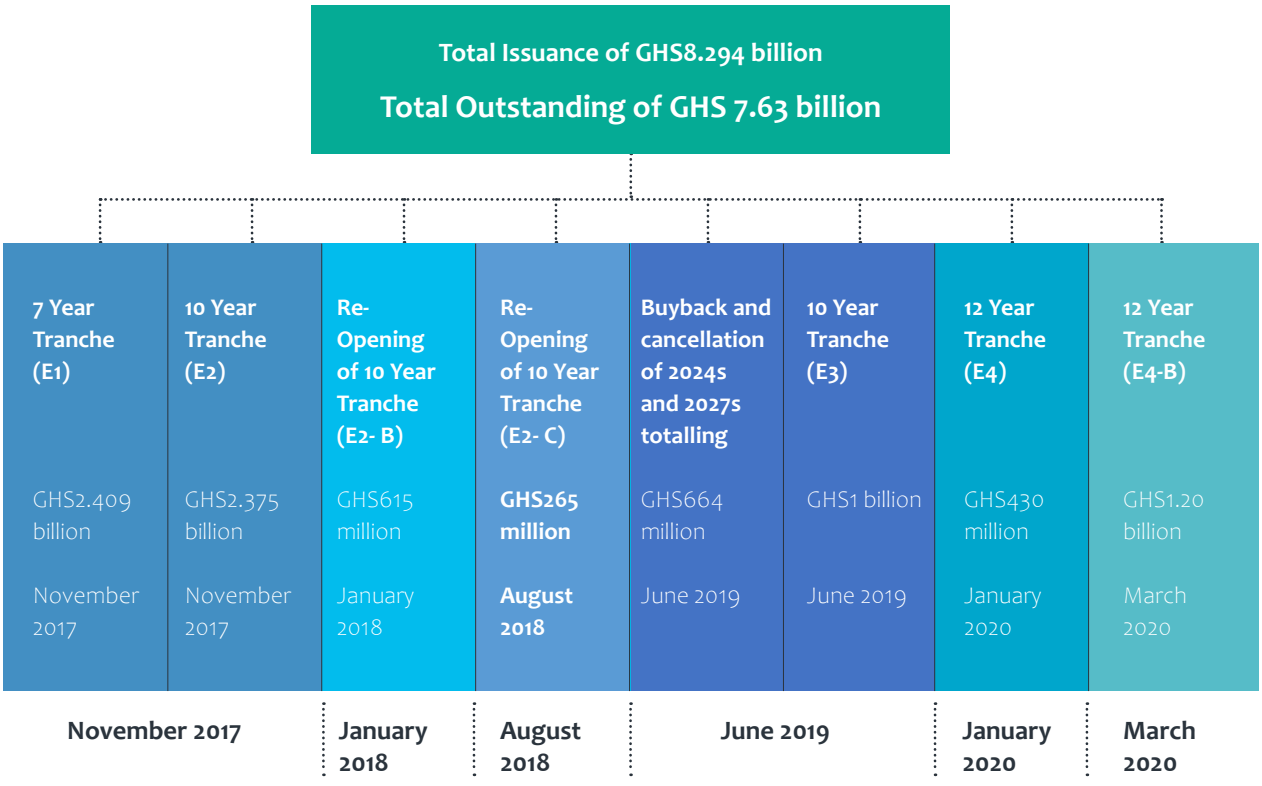
Table 25: Summary of coupon payments (2018 to date).

Bond Tranche	Amount paid to bondholders	Coupon payments due (Dec 2020 & Jan 2021)
Tranche E1 (2024)	1,332,916,814	-
Tranche E2 (2027)	1,681,691,084	-
Tranche E3 (2029)	198,500,000	99,250,000
Tranche E4 (2031)	135,686,694	167,190,042
Total	3,348,794,592	266,440,042
Total funds toward debt service	3,615,234,634	

6.11.6 Timeline of Issuances under the Programme

ESLA PLC was incorporated in September 2017 as a Special Purpose Vehicle (SPV), sponsored by the Government of Ghana, to, amongst others, issue debt securities to refinance and repay energy sector debt. A timeline of issuances under the Programme below:

Figure 50: Total Issuance November 2017 - March 2020



6.11.6 Summary of Financial Model Assumptions

As E.S.L.A. PLC has successfully collected revenues over the last two years, a combination of historical actuals, as well as projections from the National Petroleum Authority (NPA), have been used to forecast petroleum products' consumption over a 12-year forecast period to 2032.

Table 26: Key Assumptions on Issuer's Cash Flows.

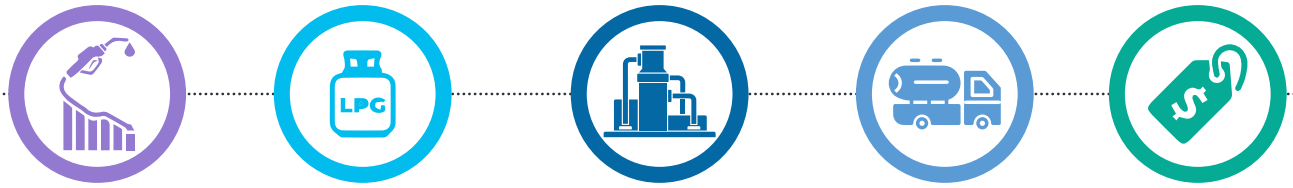
Petroleum Products Consumption Growth rate (2020-2032 CAGR)		EDRL Rate Levied	Existing Levies	New Levies
Fuel Oil	-1.4%	Fuel Oil (GHS/Ltr)	0.04	0.04
Premium	8.5%	Premium (GHS Ltr)	0.41	0.49
Gas oil	7.5%	Gas oil (GHS/Ltr)	0.41	0.49
Gasoil Mines	10.2%	Gasoil Mines (GHS/Ltr)	0.41	0.49
Gasoil Rig	13.4%	Gasoil Rig (GHS/Ltr)	0.41	0.49
MGO Local	-0.3%	MGO Local (GHS/Ltr)	0.03	0.03
LPG	6.9%	LPG (GHS/kg)	0.37	0.41
MGO Foreign	14.3%	MGO Foreign (GHS/Ltr)	0.41	0.49
		Expense and Efficiency Assumptions		
		Percentageof realisable EDRL Flows	91.20%	
		WHT Rate for Gross-Up	8.00%	
		Annual Expenses Reserve	0.50%	
		Minimum DSCR	1.25x	

Table 27: Model DSCR Outputs on Outstanding GHS 7.6 Billion Bonds (Normal Base Scenario).

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
DSCR Model Output (Including MOF Capped Commitment)	1.94x	1.72x	1.46x	1.49x	1.69x	2.11x	2.65x	2.92x	6.36x	9.19x	13.19x	16.69x	23.56x
DSCR Model Output (Excluding MOF Capped Commitment)	1.54x	1.40x	1.24x	1.27x	1.45x	1.85x	2.38x	2.67x	5.90x	8.69x	12.62x	16.10x	22.88x

7.0

Market review



CONSUMPTION

- Ghana's gross consumption reached 4.45mn in 2019
- 3.91mn mt consumed by the non-power sector,547,832mt consumed by the power sector.
- Petroleum products consumption in 2019 was about 4.06 mn mt, 4.46% higher than the 2018 consumption of 3.88 mn mt.

OMC

- About 4.02 mn mt of petroleum products was supplied to the local market in 2019.
- Out of a total of 173 OMCs/ LPGMCs who supplied products in 2019, 63 supplied products above 10,000 mt while 90 of them supplied products below 10,000mt, with about 20 companies being inactive.

BDC / REFINERY MARKET

- The BDC/Refinery market space saw the top 10 increasing their cumulative market share marginally from 80.13% in 2018 to 80.59% in 2019
- Two BDCs (Rhema Energy & SA Energy) were inactive during the year as against the 8 BDCs who were inactive in 2018
- Two BDCs (Dome Energy Resources and Sage Petroleum) lost their positions in the top 10 largest distributors in 2019. The new entrants into the top 10 were Maranatha Oil Services and Chase Petroleum

SUPPLY

- Total petroleum product supply reached 5.48mn mt in 2019. This comprise imports of 4.38mn mt, local production of 717,235mt and an opening stock position of 379,553mt

PRICING

- The average ex-pump price of gasoline for the year 2019 ranged between GHS4.8925/ltr and GHS5.3393/ltr
- Taxes and regulatory margins averaged Ghp174.67/ltr and Ghp173.33/ltr for gasoline and gasoil respectively in 2019. This was Ghp20/ ltr (13%) higher than the taxes and regulatory margins for 2018.

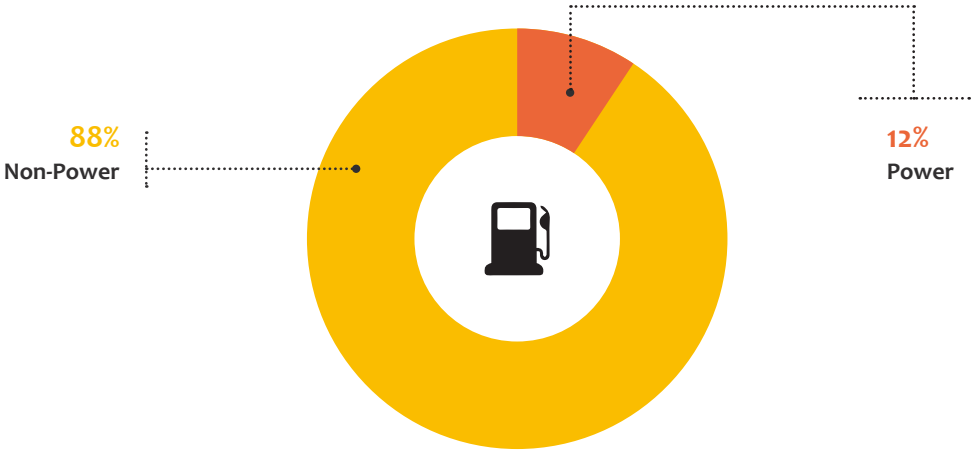
7.1 National Consumption

Ghana's gross national consumption[223] reached 4.45 mn mt in 2019, 0.25% lower than the gross national consumption in 2018. A total of 3.91 mn mt was consumed by the non-power sector, representing 88% of consumption, while 547,832mt was consumed by the power sector (fuel oil for power, propane for power plants, fuel oil consumed by karpowership, crude for power).

Petroleum products consumption in 2019 was about 4.06 mn mt, 4.46% higher than the 2018 consumption of 3.88 mn mt. This was on the back of increases in demand for gasoline, fuel oil for power plants, naphtha, gasoil and Aviation Turbine Kerosene (ATK). The 2019 petroleum products consumption is the highest observed to date based on official NPA data. Kerosene, MGO foreign, and propane for power saw drops of 24%, 30% and 62% respectively in consumption relative to the previous year.

223 Gross national consumption is the sum of total petroleum and petroleum products (bitumen and fuel oil from karpowership) consumed in 2019.

Figure 51: 2019 Gross National Consumption.



Growth in gasoil and gasoline demand has also been spurred by the growth in the number of registered vehicles in the country. According to the Driver and Vehicle Licensing Authority (DVLA), the number of registered vehicles has increased by from 94,998 in 2009 to 167,954 in 2019, representing a 77% increase.

Figure 52: Petroleum product consumption (2019).

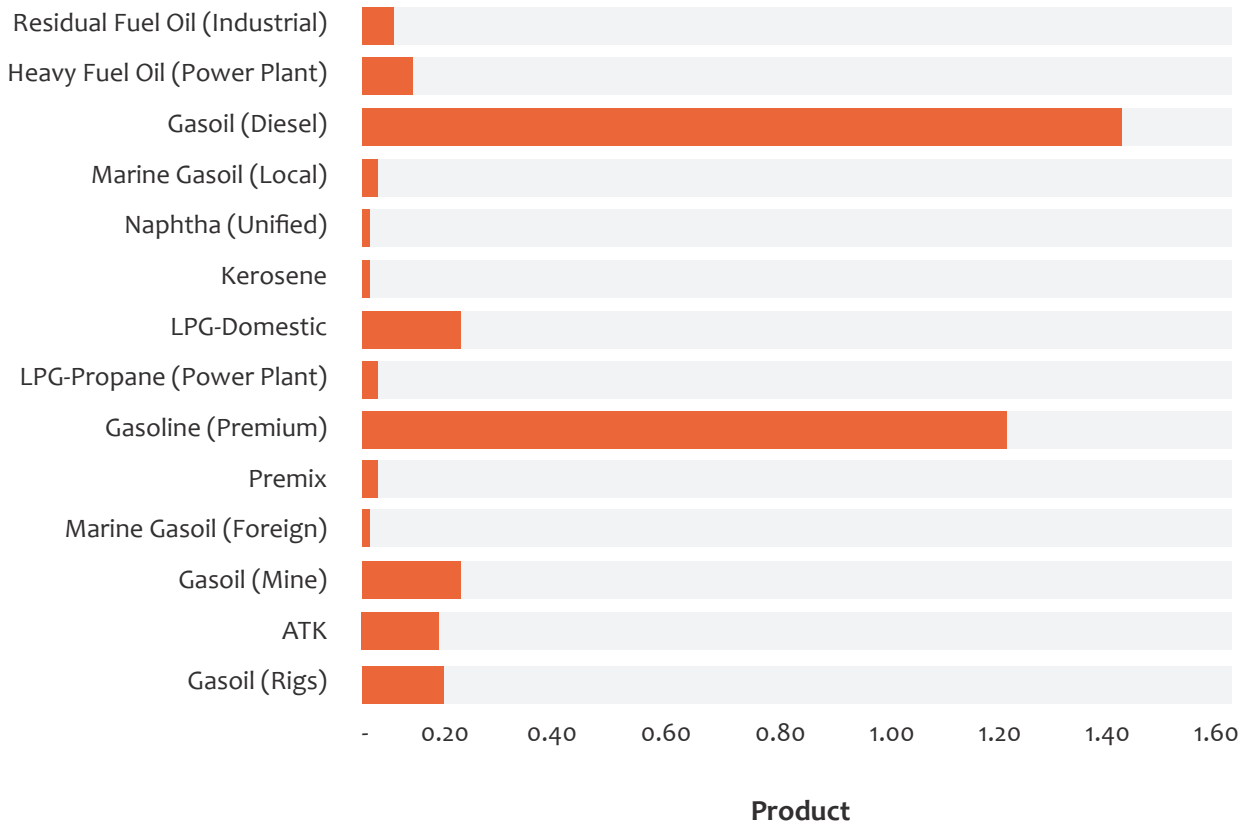
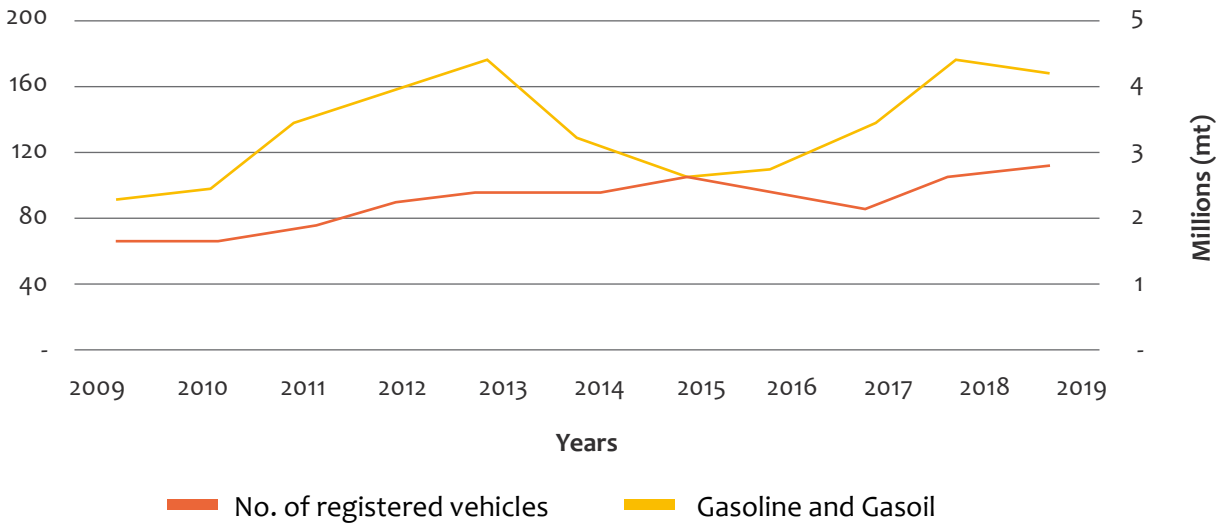


Figure 53: Petroleum product consumption vrs Number of Registered Vehicles (2009-2019).

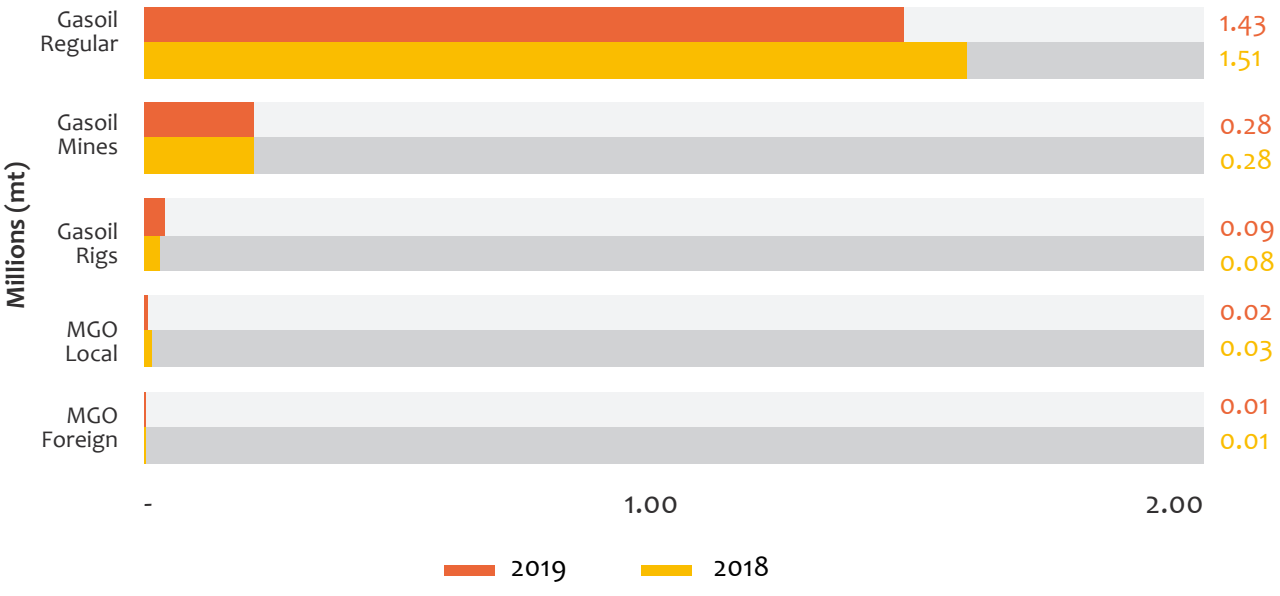


7.1.1 Gasoil

Gasoil remained the most consumed petroleum product in the country. Its consumption increased by 3.75% to 1.91mn mt in 2019 from the 1.84mn mt recorded in 2018. The increase was driven by increases in the consumption of gasoil regular and marine gasoil (local) by 5.80% and 6.69%, respectively. Consumption of MGO foreign and MGO rigs however fell respectively by 29.67% and 13.87% in 2019 from 10,258.62mt and 88.171.26mt in 2018 to 7,214.96mt and 75,938.80mt in 2019. The decrease observed in the MGO foreign follows the efforts made by the NPA in January 2018 to curb the diversion of MGO foreign into the regular gasoil market.

The imposition of taxes on MGO foreign in 2018 has seen the volumes of MGO foreign consumption significantly reduced. This reduction in consumption could be attributed to the illicit activities no longer being attractive for the perpetrators. Also, the imposition of taxes made the price of MGO foreign in Ghana comparatively higher than in neighbouring countries.

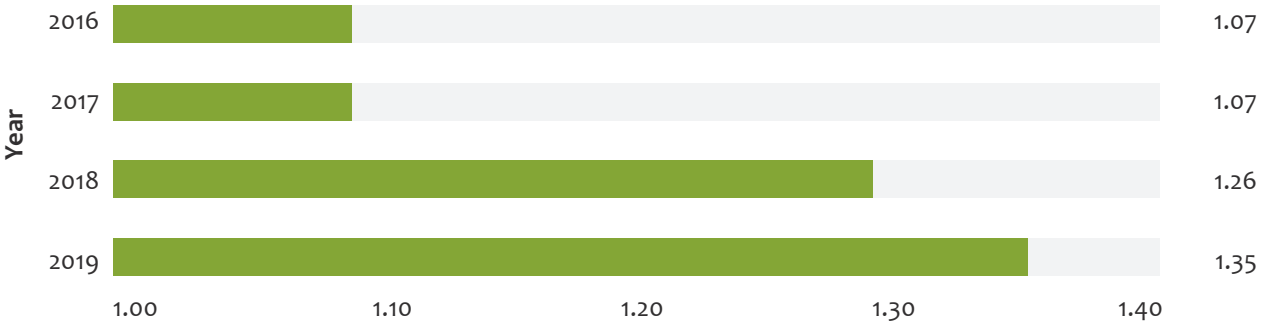
Figure 54: Gasoil Consumption (2018-2019).



7.1.2 Gasoline

Total gasoline consumption in 2019 increased to 1.35 mn mt in 2019 from 1.26 mn mt in 2018. This represents a 7.21% increase compared to the 17% increase seen in 2018 when consumption rose to 1.26 mn mt from 1.07 mn mt in 2017. The 7.21% year-on-year growth in gasoline consumption is largely driven by the increase in the number of registered vehicles by 12%, from 1.35mn cars in 2018 to 1.52mn cars in 2019. Gasoline consumption continues to be an important source of fuel as the number of gasoline vehicles in the country continues to increase.

Figure 55: National Comsumption of Gasoline (2016 - 2019).

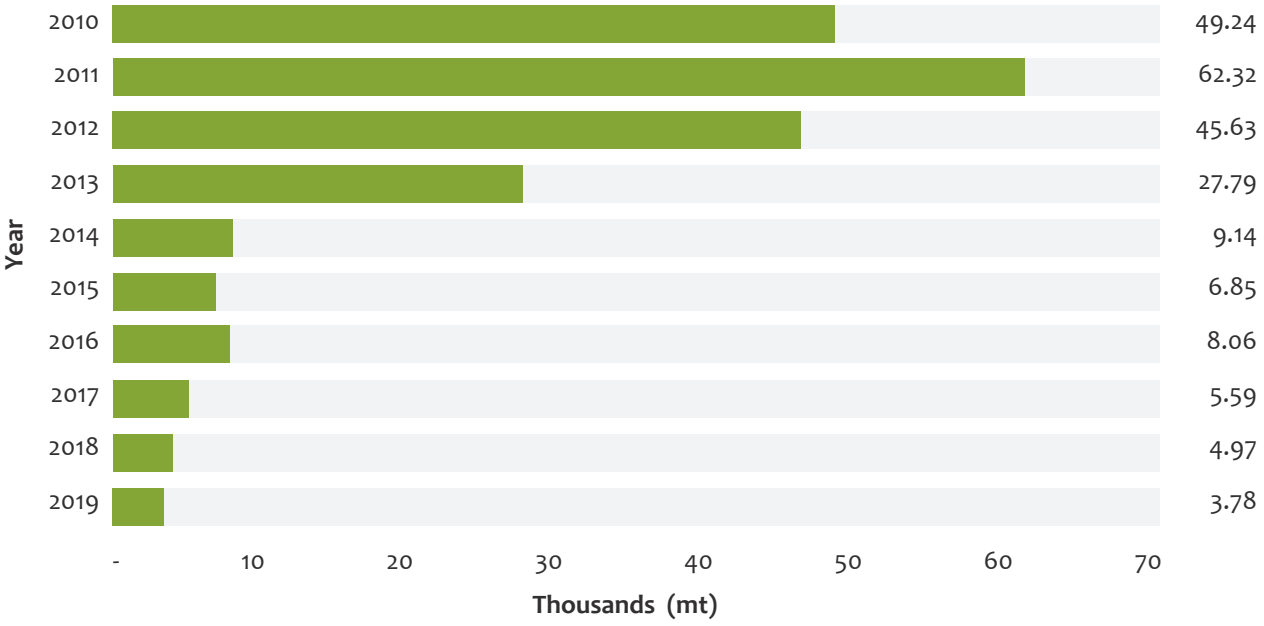


7.1.3 Kerosene

The consumption of kerosene continued its decrease over the years. The trend of consumption of kerosene in the last 10 years (2010-2019) shows a peak in demand in 2011 at 62,315.01mt, which was followed by a consistent fall in demand year-on-year. Relative to the peak demand in 2011, kerosene demand in 2019 fell to 3,783mt, marking a 93.93% drop. Compared to 2018, consumption fell by 23.82% from 4966mt. The continuous fall in kerosene consumption between 2010 and 2019 is largely attributable to the introduction of the Fuel Marking Programme by the NPA. The programme addressed the problem of kerosene being used as an adulterant for gasoil.

In line with policy position by government to shift from the consumption of wood fuel to the use of LPG, it is expected that the consumption of kerosene will reduce further in the years to come. Increased urbanization of the Ghanaian population will also contribute to drive the switch from the use of kerosene to cleaner sources such as LPG.

Figure 56: Kerosene Comsumption (2010 - 2019)



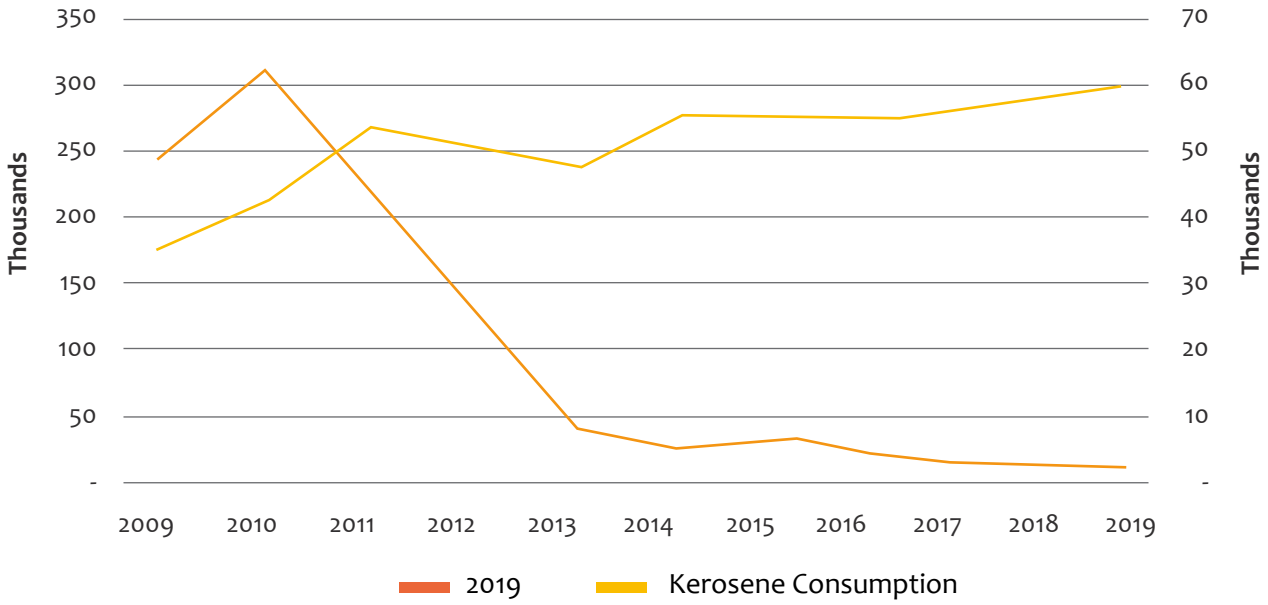
7.1.4 LPG

The consumption of LPG fell by 13.74% from 394,352.89mt in 2018 to 340,150.31mt in 2019. This decrease is mainly on the back of the drop in consumption of Propane for power by 61.73%, from 106,024mt in 2018 to 40,575mt in 2019.

It is indicative that a direct substitution in the use of propane for lean gas for power production played a key role in the decrease in the consumption of LPG for power in 2019. However, LPG for domestic consumption increased by 3.90% in 2019. This is a good milestone towards the Ministry of Energy's goal to increase LPG penetration to 50% by 2030.

Statistics from the Energy Outlook (2019 Energy Outlook, Energy Commission) shows that LPG penetration rate has increased from 18% in 2010 to 25% in 2019. This concurs with data from the Ghana Living Standards Survey 7 report which puts LPG penetration rate at 24.5% in 2019, marking a 2.2% percentage point increase over the 22.3% reported in 2014.

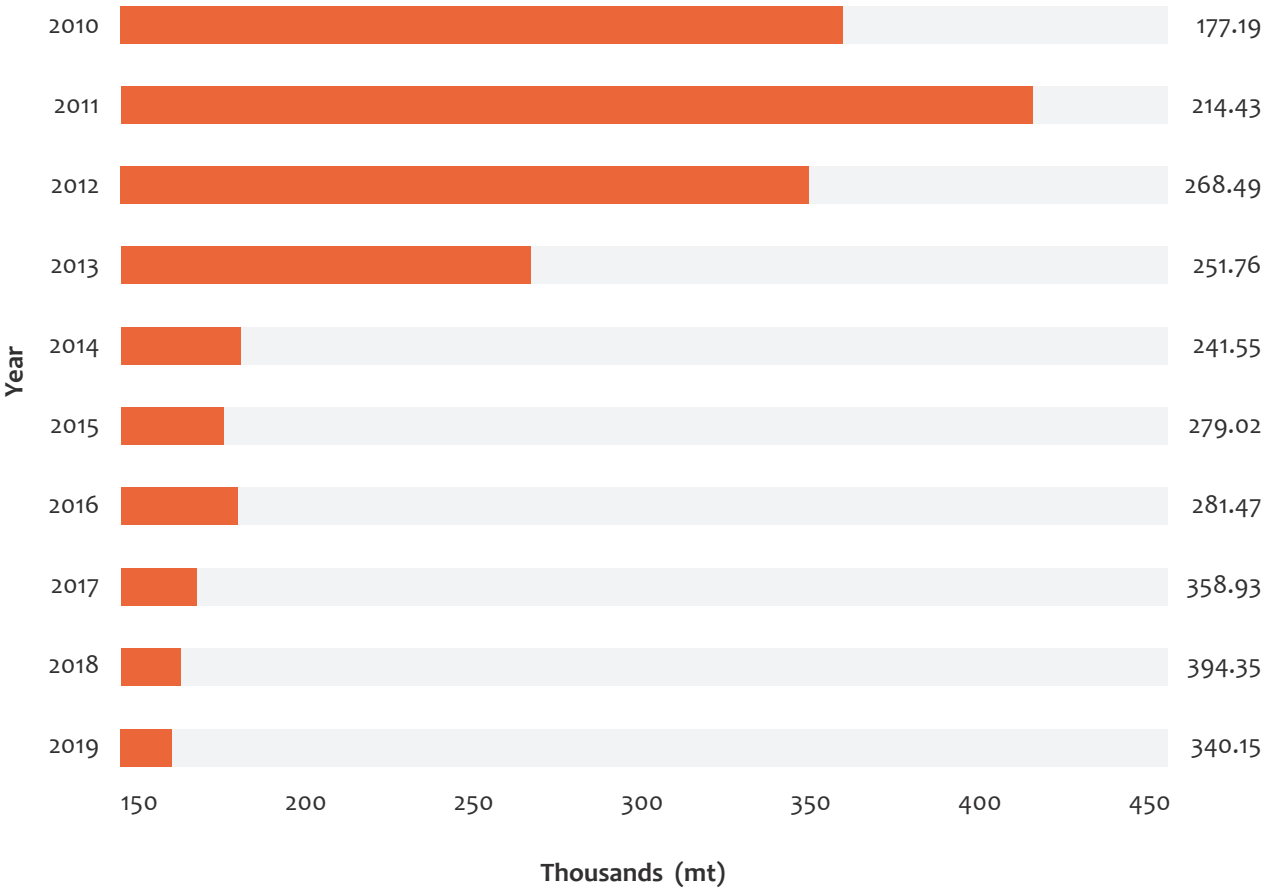
Figure 57: Kerosene vrs LPG consumption 2010 - 2019



The 2019 Energy Outlook is however sceptical about the 50% LPG penetration goal since the consumption of charcoal, the primary substitute for LPG has also been rising over the years. The switch from the use of wood fuels such as charcoal and firewood in rural areas to cleaner sources, such as LPG will not materialise if prices of LPG remain uncompetitive or way above the price of charcoal. To ensure a complete and smooth transition to the use of LPG nationwide, policy must be structured in a way that encompasses the welfare of both rural and urban consumers. It is imperative that government sets a threshold price (price ceiling) that ensures the affordability of LPG to all consumers.

Statistics from the Energy Outlook (2019 Energy Outlook, Energy Commission) shows that LPG penetration rate has increased from 18% in 2010 to 25% in 2019.

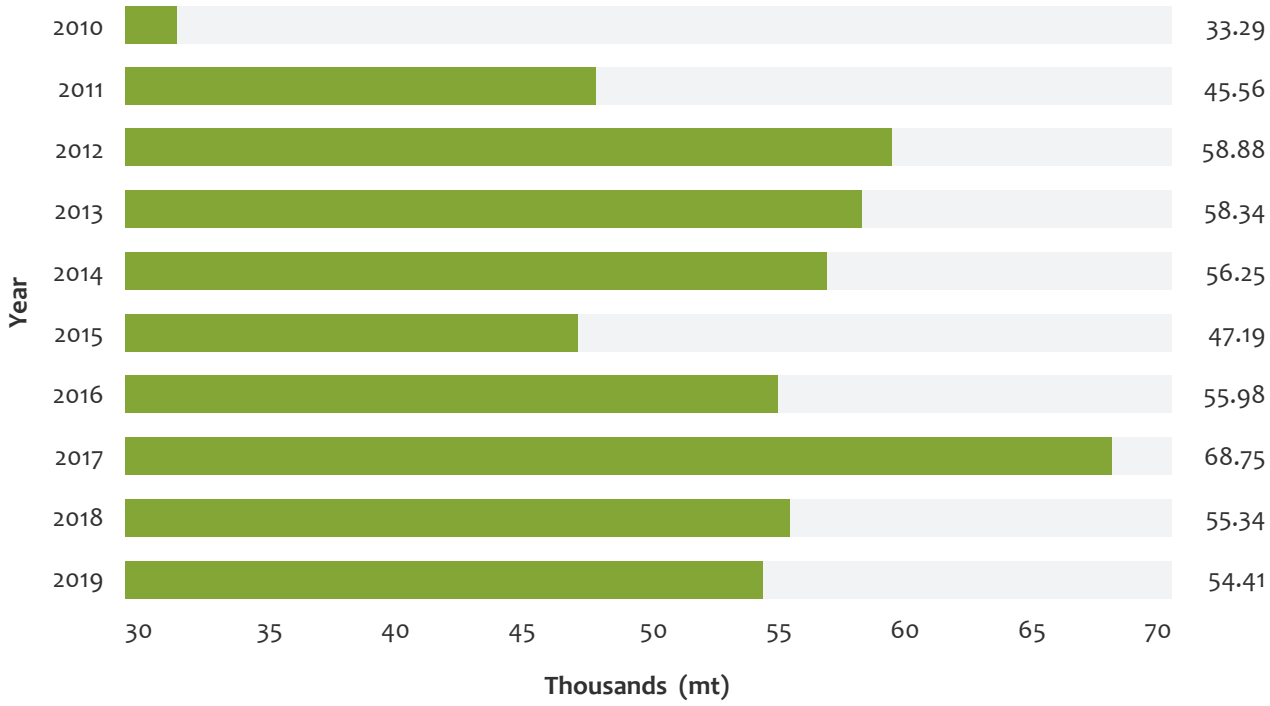
Figure 58: LPG Consumption from (2010 - 2019)



7.1.5 Premix

Premix consumption fell marginally from 55,335mt in 2018 to 54,408mt in 2019, indicating a 1.68% drop. Compared to 2017, the 2019 consumption fell by about 20% from 68,755mt. The pattern of consumption of premix over the last 5 years (2015 - 2019) showed an annual average consumption of about 56,000mt. 2017 recorded the highest consumption over the five period, while 2015 recorded the lowest with 47,190mt.

Figure 59: Premix Consumption chart (2010 - 2019).



7.1.6: Fuel Oil

Consumption of fuel oil stood at 174,416mt in 2019, a 25.39% increase over the 139,099mt consumed in 2018. This increase was driven largely by heavy fuel oil for power plants, which rose by 29%, from 103,345mt in 2018 to 132,983mt 2019. Fuel oil consumption in 2019 comprised 132,983mt (76.24%) of heavy fuel oil for power generation and 41,433mt (23.76%) of residual fuel oil for industries.

Figure 60: Fuel Oil Consumption (2019).

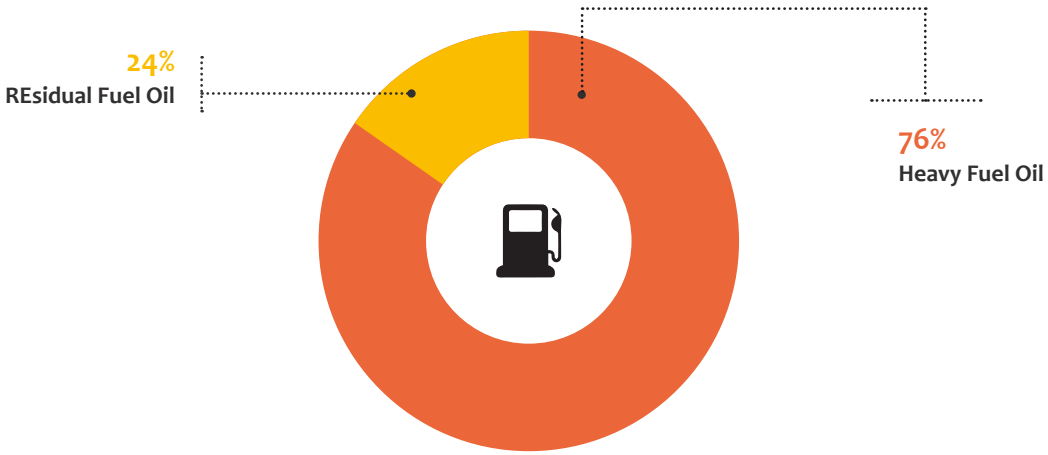
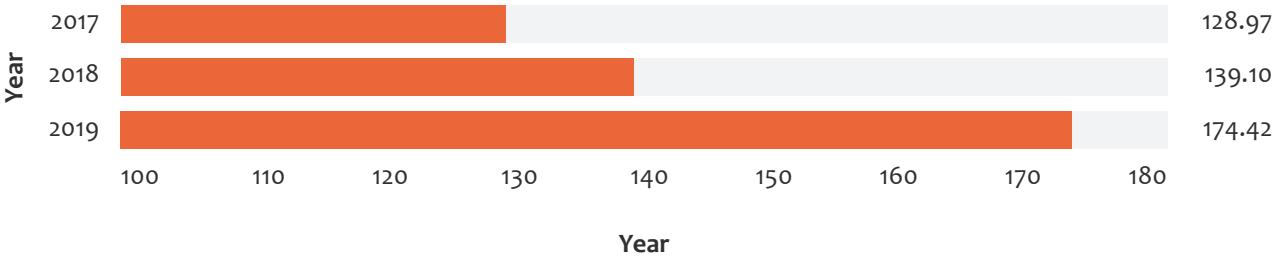


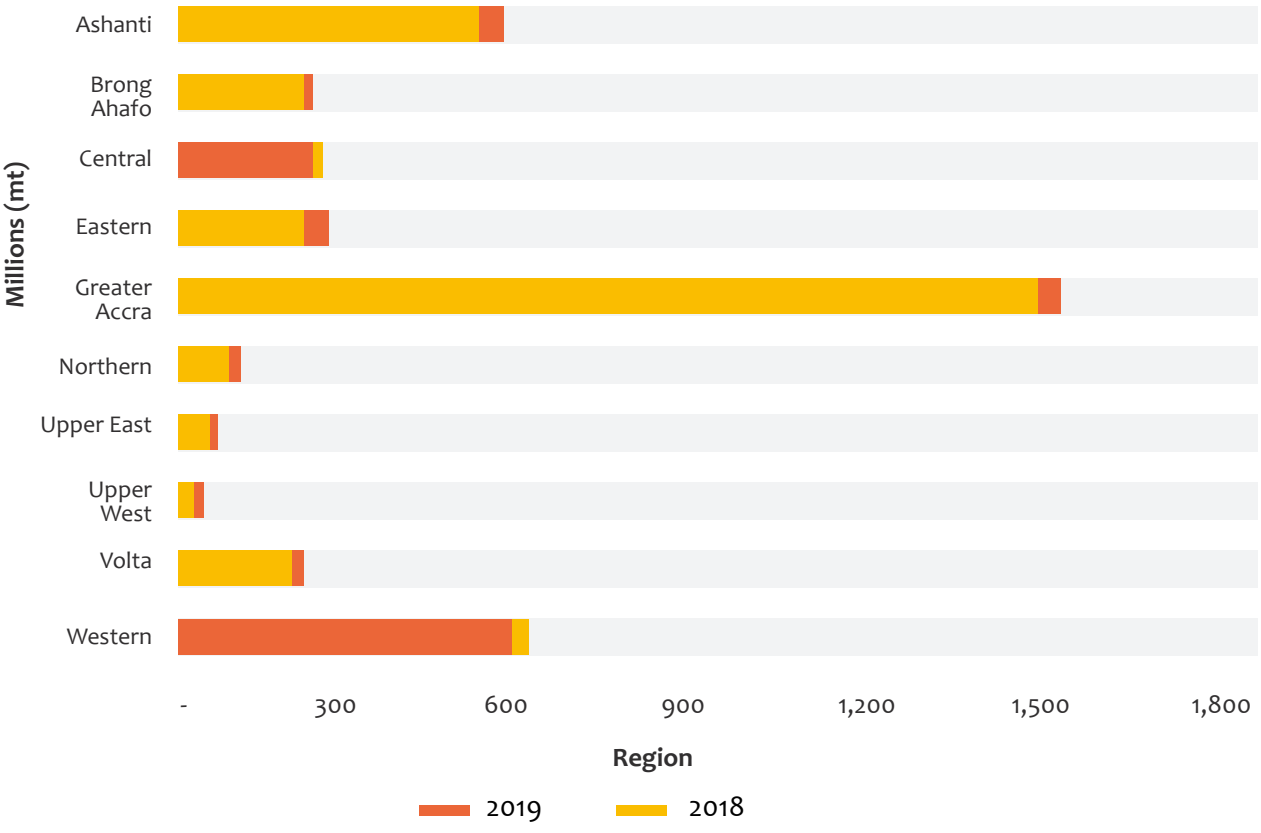
Figure 61: Fuel Oil Consumption (2017-2019).



7.2 Regional Consumption

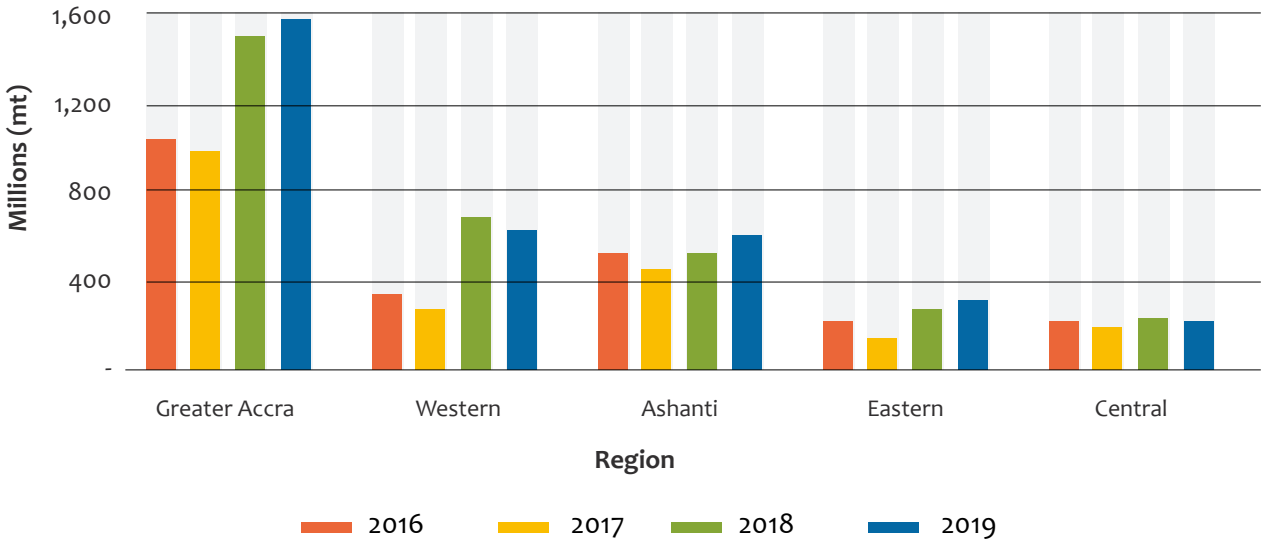
Out of the 4.06 mn mt of petroleum products consumed in 2019 across the country, the Greater Accra Region alone consumed 1.56 mn mt, representing a 38.51% share of total products consumed. The volume consumed in the Greater Accra Region increased by 4% year-on-year between 2018 and 2019. The Greater Accra Region was followed by Western and Ashanti Regions whose consumption stood at 627,864mt and 600,926mt, respectively, in 2019. The least consumption in 2019 was witnessed in the Upper West Region and this is largely attributable to its low population and a low level of economic activity in the region. The significantly high level of petroleum product consumption in the Greater Accra Region rode on the back of the growing commercial and administrative activities in the region, and increasing power production in the eastern part of the region (Tema), as well as the region's rising population.

Figure 62: Regional Consumption of Petroleum Products (2018-2019).



Over the past four (4) years, the Greater Accra Region has consistently consumed volumes above 1.0 mn mt, with consumption rapidly surpassing 1.5 mn mt over the past two years (2018-2019). All other 4 regions in the top 5 consumed quantities below 700,000 mt with similar increasing trends in consumption between 2016 and 2019, with the exception of 2017, when there was a marginal fall in petroleum consumption across board. However, Western Region displaced Ashanti Region to rank 2nd in 2018. This surge in Western Region's consumption was significantly spurred by the increase in mining activities and power generation, which have substantially increased the consumption of Gasoil Mines, LPG for power plant and fuel oil respectively, relative to the Ashanti Region.

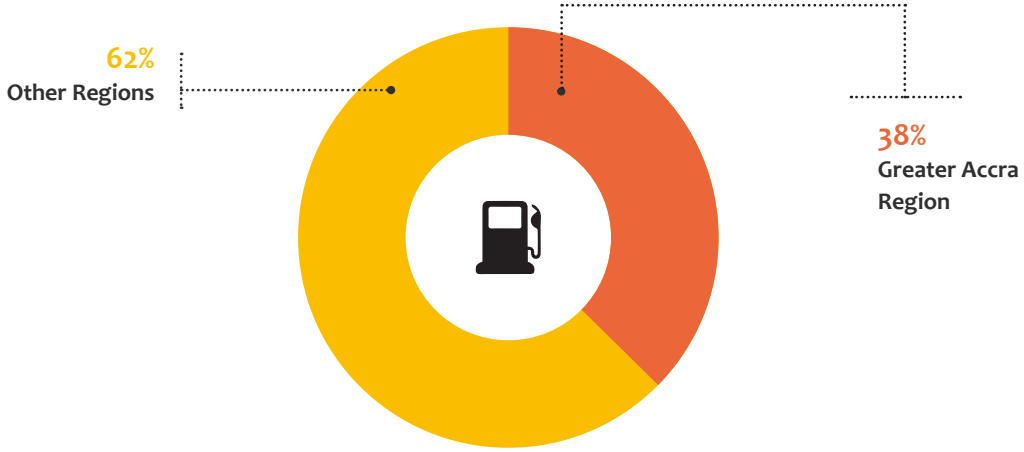
Figure 63: Top 5 Regional Consumers of Petroleum Products (2016-2019)



Western Region displaced Ashanti Region to rank 2nd in 2018. This surge in Western Region's consumption was significantly spurred by the increase in mining activities and power generation, which have substantially increased the consumption of Gasoil Mines, LPG for power plant and fuel oil respectively, relative to the Ashanti Region.

It is evident from the Chart above that, for the fourth year running, Greater Accra Region alone has consistently accounted for about a 40% share of total petroleum product consumption in the country, with the other nine (9) regions accounting for 60%.

Figure 64: Regional Consumption: Greater Accra vs Others (2019).



7.3 OMC/LPGMCs Performance

A total of about 4.02 mn mt of petroleum products were supplied to the local market in 2019. This was 6.32% higher than the 3.78 mn mt supplied in 2018. The surge in sales was driven by increases in the sale of gasoline, gasoil regular, LPG Domestic, ATK, RFO and MGO Local by 7.21%, 5.80%, 3.90%, 15.67%, 25.39% and 6.69%, respectively. The supply of Kerosene, MGO Foreign, Gasoil (Rig) and Premix in 2019, however, decreased by 23.82%, 29.67%, 13.87% and 1.68%, respectively.

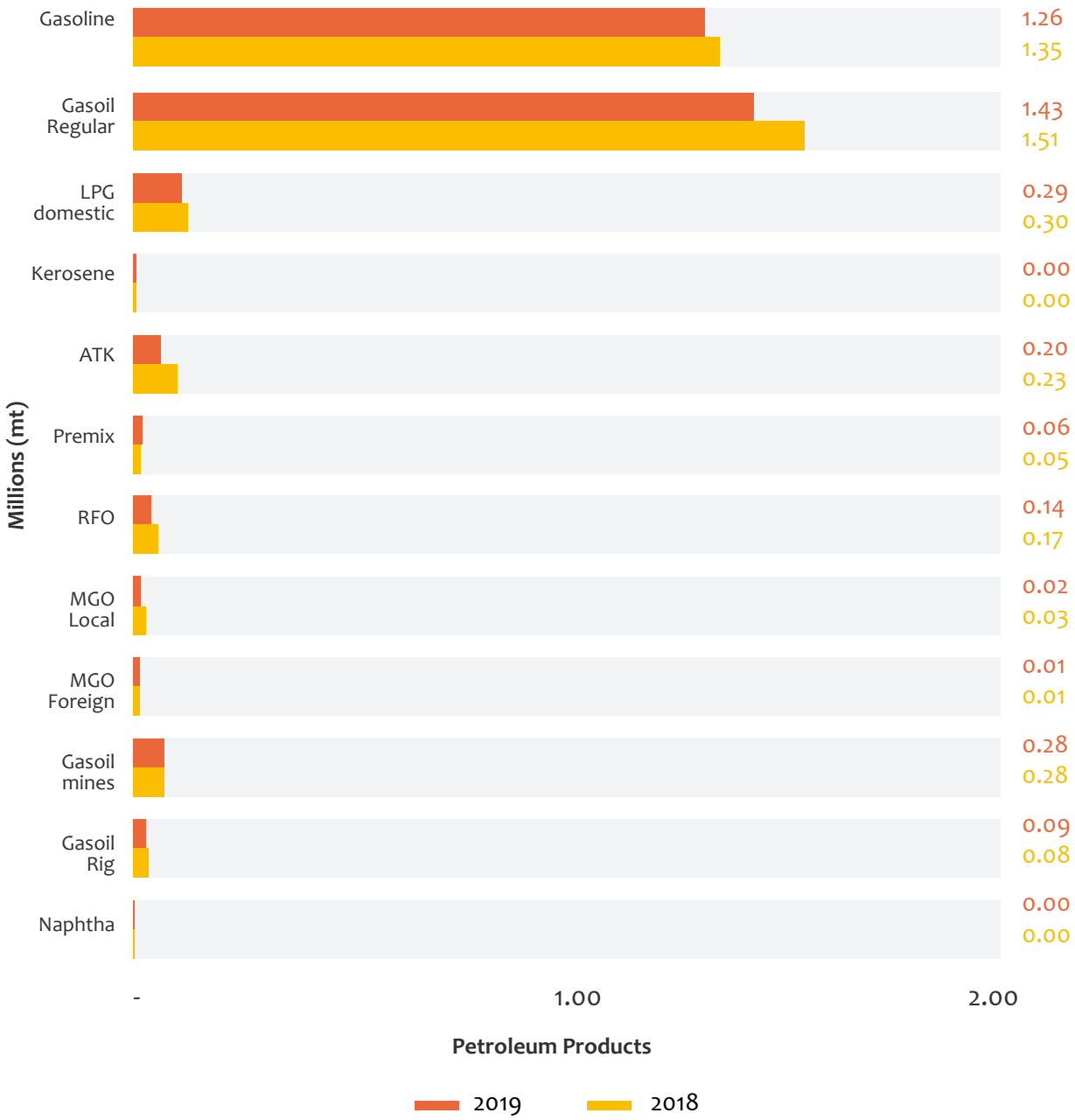
Increases in Sale

- 7.21% Gasoline
- 15.67% ATK
- 5.80% Gasoil Regular
- 25.39% RFO
- 3.90% LPG Domestic
- 6.69% MGO Local

Decreases

- 23.82% Kerosene
- 1.68% Premix
- 29.67% MGO Foreign
- 13.87% Gasoil (Rig)

Figure 65: OMC Performance (2019).



Out of a total of 173 OMCs/LPGMCs who supplied products in 2019, 63 supplied products above 10,000mt while 90 of them supplied products below 10,000mt, with about 20 companies being inactive.

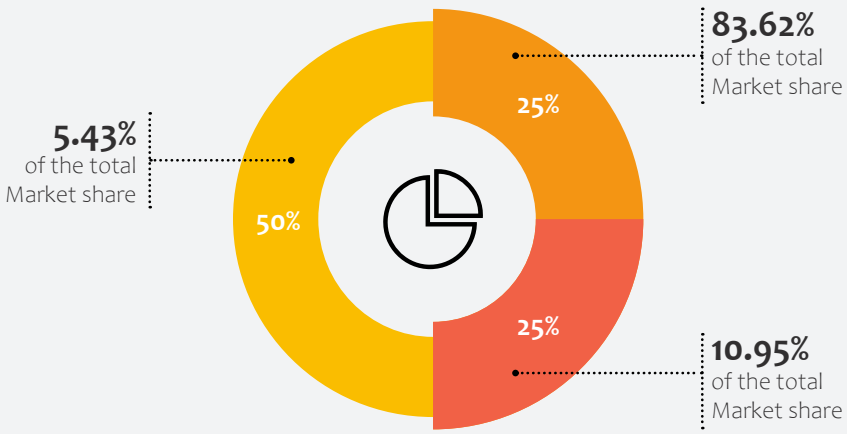
The top 25% LPGMCs/OMCs accounted for 83.62% of the total market share, the next 25% accounted for 10.95% while the rest accounted for 5.43%. GOIL's dominance in the retail market continued for the 5th year running. This has seen its share in the sale of Gasoline (20.60%), Gasoil (17.64%), MGO Local (29.39%), MGO Foreign (38.19%), Gasoil Rigs (74.97%) and LPG (9.68%) for the year 2019.

63
Supplied products above **10,000mt**

90
Supplied products below **10,000mt**

20
Inactive companies

Total Market Share

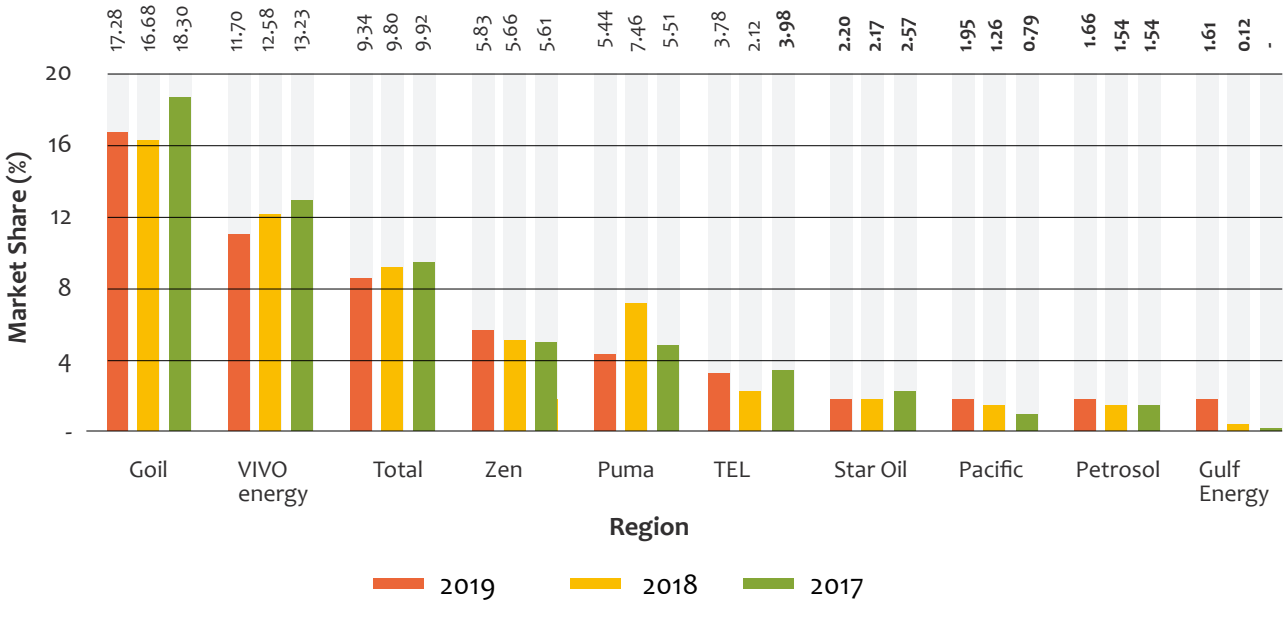


GOIL
Good energy

GOIL's shares in the sale of:

20.60%	17.64%	29.39%	38.19%	74.97%	9.68%
Gasoline	Gasoil	MGO Local	MGO Foreign	Gasoil Rigs	LPG

Figure 66: OMC market share (2017-2019)

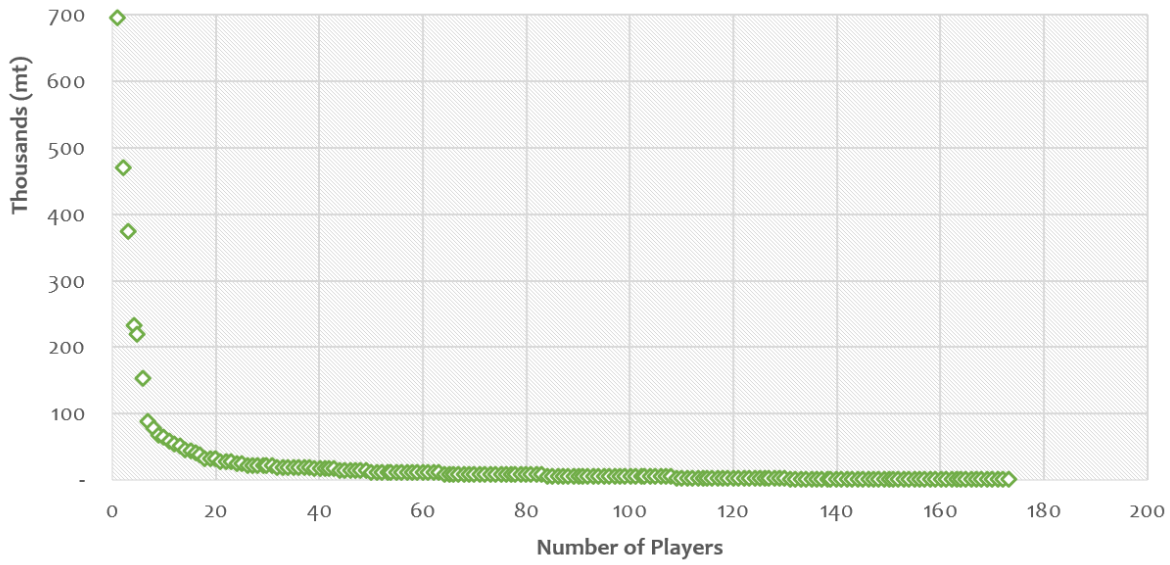


The top 10 OMCs chart for 2019 saw Pacific and Gulf Energy as new entrants, replacing Top Oil and Frimps Oil. Zen Petroleum, which ranked 5th in 2018, displaced Puma to rank 4th in 2019. Gulf Energy had the highest growth rate in 2019, having its volume and market shares increasing to 64,538mt and 1.61%, respectively, in 2019 from 4,474mt and 0.21% in 2018.

Figure 64 shows that majority of the players in the market supplied products below 100,000mt. Only GOIL supplied above 600,000mt in 2019. Four companies supplied between 200,000mt and 500,000mt while the rest supplied below 100,000mt in the year 2019. This is an indication of a market with many sellers but dominated by a few large players. The top 10 OMCs supplied products of up to 2.44 mn mt representing 60.76% of total sales. As indicated earlier, GOIL maintained its position as the largest Oil Marketing Company in 2019, a position it has held for the past 5 years after replacing Vivo Energy (Shell Licensee) in 2014. It supplied 694,538mt of petroleum products representing 17.28% share of the market.

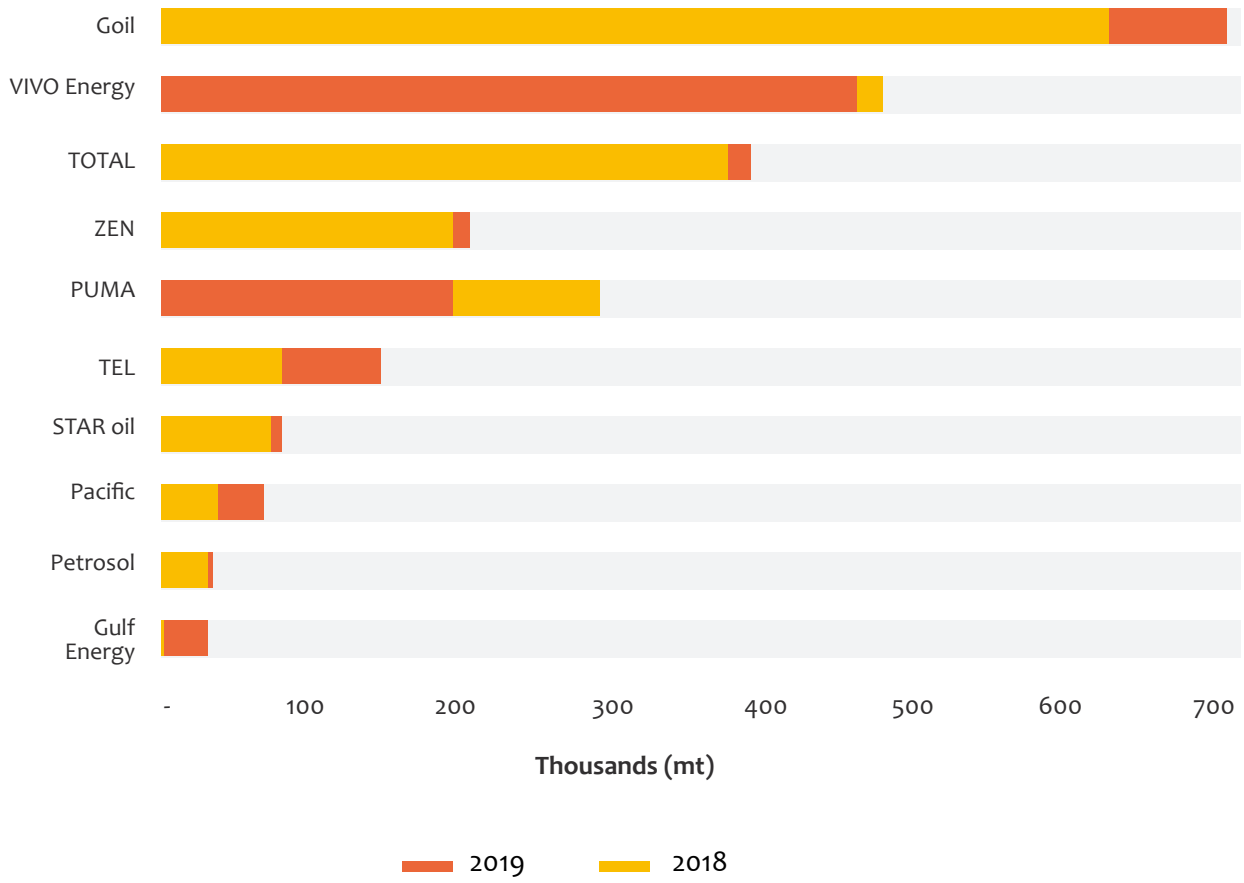
This was higher than its 2018 performance in which it supplied 630,590mt and commanded a 16.68% share of the market. The entrance of Gulf Energy into the top 10 OMCs in 2019 was propelled by its growth in the gasoil mines market.

Figure 67: OMC Market Dispersion (2019).



The top 10 OMCs supplied products of up to 2.44 mn mt representing 60.76% of total sales. As indicated earlier, GOIL maintained its position as the largest Oil Marketing Company in 2019, a position it has held for the past 5 years after replacing Vivo Energy (Shell Licensee) in 2014.

Figure 68: Top 10 OMCs (2019).



7.3.1 Market Trends

While majority of the top 10 OMCs sold large volumes of regular gasoline and regular gasoil as their main products, Puma, Zen Petroleum and Tel Energy respectively had ATK, gasoil mines and RFO as their lead products.

ATK accounted for 56.73% of Puma Energy's total sales while gasoil mines and RFO accounted for 83.75% and 79.76% of total sales for Zen Energy and Tel Energy respectively. Sale of gasoline in 2019 stood at 1.35 mn mt, a 7% increase over the 1.26 mn mt sold in 2018.

Three of the top 5 retailers of gasoline (Vivo Energy, Total and Star Oil) saw increase in their market shares while Goil and Allied saw a 1% and 0.35% decreses in their market shares respectively.

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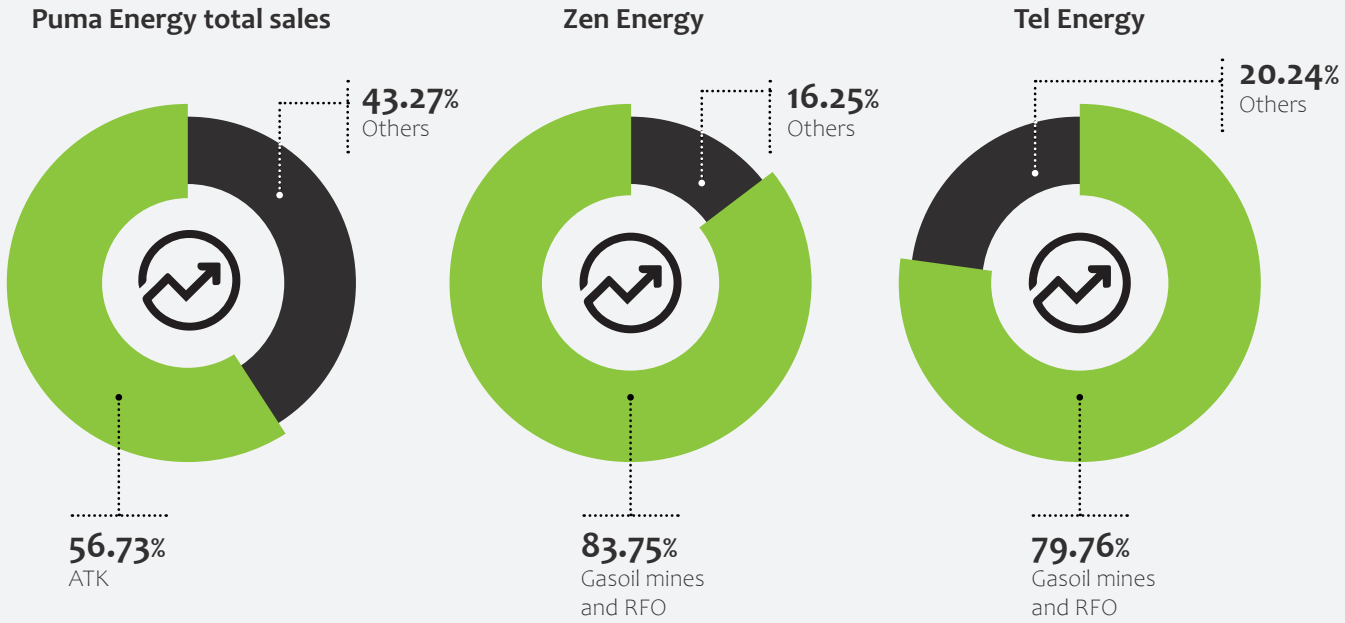
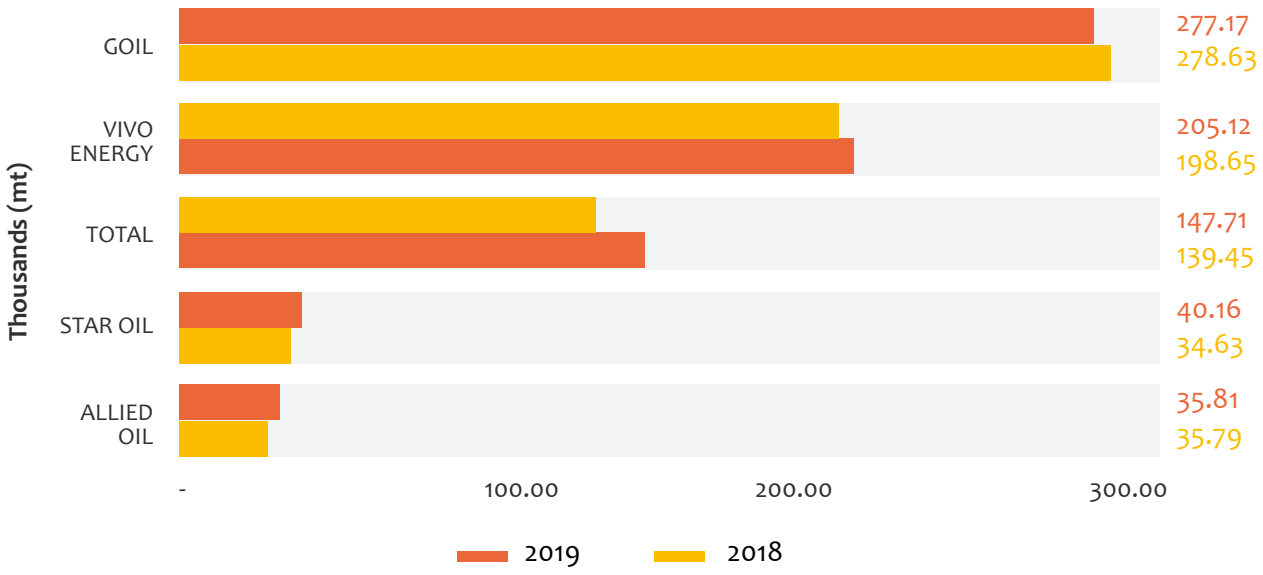
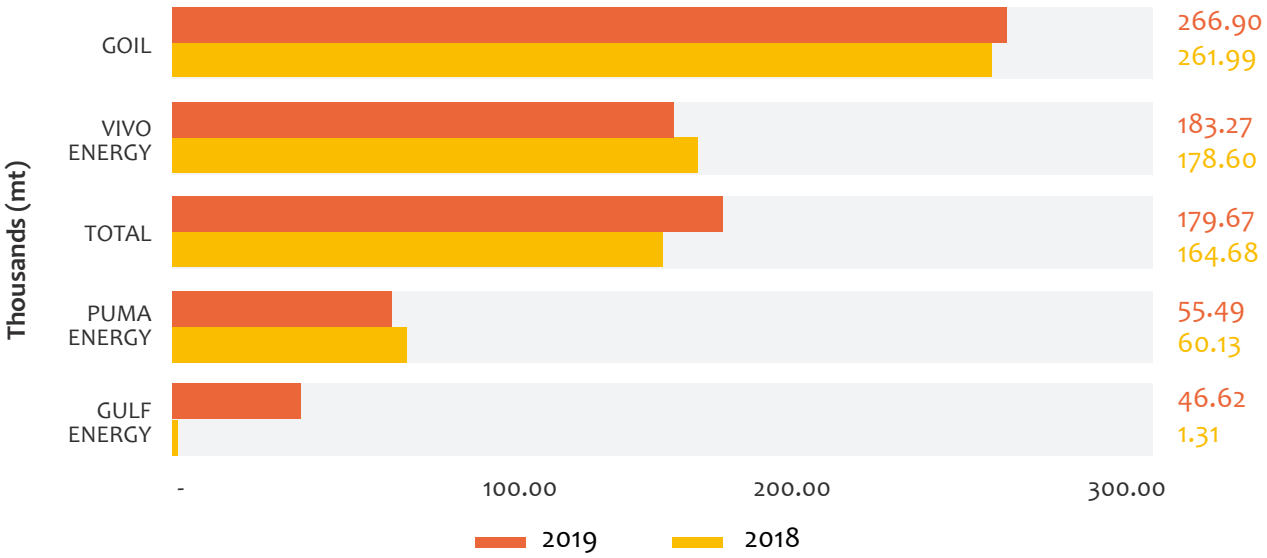


Figure 69: Top 5 Sellers of Gasoline (2018 - 2019)



2019 saw a surge in the sale of regular gasoil, with volumes increasing by 6% from 1.43mn mt in 2018 to 1.51mn mt in 2019. The top 5 OMCs in the market commanded a 48.40% market share, leaving the 51.60% to the remaining 168 OMCs. There was no change in the top 4 spots as compared to 2018. However, Gulf Energy, a new entrant, replaced Star Oil as the 5th leading retailer of regular gasoil. Between 2018 and 2019, Gulf energy experienced over 3,400% growth in sales, having increased its volume retailed to 46,615mt in 2019 from the 1,312mt sold in 2018.

Figure 70:Top 5 Sellers of Gasoil (2018 - 2019).



The 2019 gasoil mines market remained highly oligopolistic, with 3 main players (Zen Petroleum, Gaso Petroleum and Champion Oil) selling volumes above 20,000mt. The other 7 players sold volumes below 20,000mt. Out of the 283,564mt of gasoil sold in the year under review, Zen Petroleum's sales constituted 69.19%, Gaso Petroleum, a new entrant, had 8.17% market share, while GOIL, Vivo Energy and Champion Oil had 5.81%, 5.28% and 7.06% shares respectively.

These five players together accounted for a 95.50% of the gasoil mines market share. The share of the market is dominated by local players, whose combined shares has increased to 90.58% in 2019, up from 73.7% in 2018. This increasing participation of local players may be largely attributed to the Ghanaian Content and participation policy.

Zen Petroleum, the leading marketer of gasoil mines, had it markets share increase from 67.41% in 2018 to 69.19% in 2019. This increase resulted from the drop realised by Vivo Energy and Total Petroleum, whose respective shares declined to 5.28% and 4.13% in 2019 from 12.17% and 14.09% in 2018.

Zen has consistently dominated the market for the sale of gasoil to the mines since 2014, after replacing Total Petroleum as the largest marketer of gasoil to the mines.

With the advent of the Ghanaian content and participation policy, which gives the local companies a competitive advantage over foreign owned companies, it may be expected that Zen Petroleum's dominance of the market will remain – all things being equal.

2019 saw a surge in the sale of regular gasoil, with volumes increasing by 6% from 1.43mn mt in 2018 to 1.51mn mt in 2019.

20,000mt
Zen Petroleum, Gaso Petroleum and Champion Oil

20,000mt
Other 7 players

283,564mt
Volumes of Gasoil Mines sold 2019

69.19%
ZEN PETROLEUM

8.17%
GASO PETROLEUM

5.81%
GOIL

7.06%
CHAMPION OIL

95%
of total market share

COMBINED SHARES OF LOCAL PLAYERS

90.58%
2019

73.7%
2018

22.9%
INCREASE

DROP REALISED

5.28%
2019 VIVO

4.13%
2019 TOTAL

12.17%
2018 VIVO

14.09%
2018 TOTAL

Figure 71: Gasoil (Mines) Market Shares Distribution (2019).

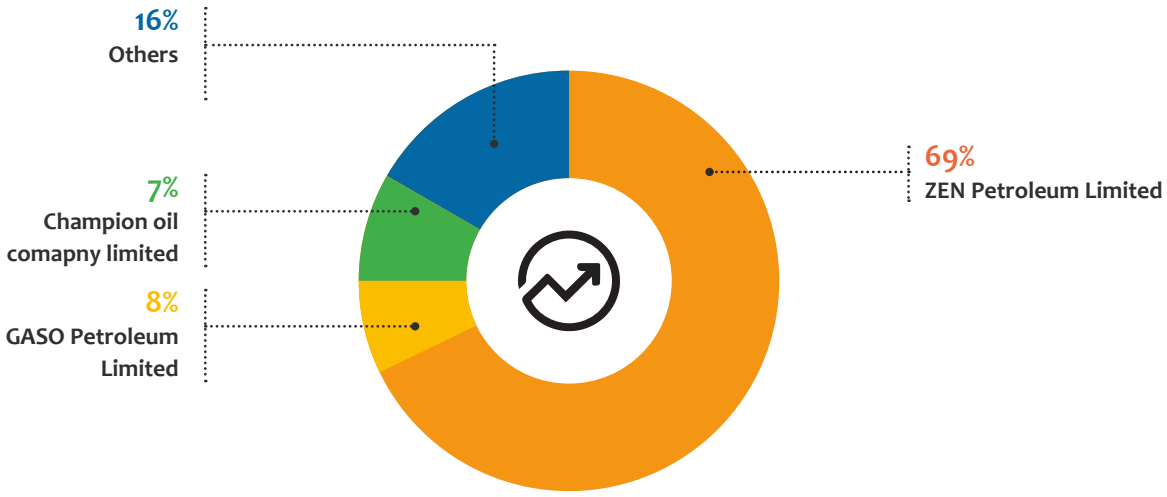
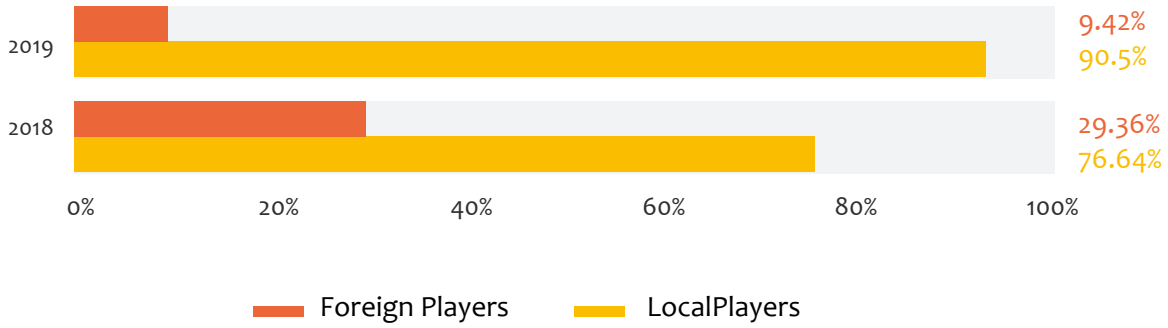


Figure 72: Gasoil Mines Market Share Local and Foreign-owned OMCs (2018 vs 2019).



7.4 BDC/Refinery Market

The BDC/Refinery market space saw the top 10 increasing their cumulative market share marginally from 80.13% in 2018 to 80.59% in 2019. The remaining 27 BDCs controlled 19.41% of the market in 2019. However, the top 5 BDCs saw a marginal decline in their grip on the market from 59.63% in 2018 to 58.99 % in 2019. Two BDCs (Rhema Energy & SA Energy) were inactive during the year as against the 8 BDCs who were inactive in 2018.

Two BDCs (Dome Energy Resources and Sage Petroleum) lost their positions in the top 10 largest distributors in 2019. The new entrants into the top 10 were Maranatha Oil Services and Chase Petroleum with market shares of 4.05% and 3.98%, respectively, as against the 0.75% and 2.19% respectively recorded last year (2018).

Maranatha Oil Services and Chase Petroleum's entrance into the top 10 rode largely on the back of increased distribution of gasoil and gasoline in 2019. On the whole, the former increased its products sale from 29,122mt in 2018 to 164,523mt in 2019, representing a 464.94% increase while the latter's rose from 85,016mt in 2018 to 161,416mt in 2019, representing an increase of 89.87%. Maranatha Oil Services had its gasoline and gasoil regular market shares increase to 6.74% and 3.85% from the 0.92% and 1.21% recorded in 2018.

Also, its gasoil mines sale rose from 279mt in 2018 to 11,055mt in 2019, representing a 3,862% growth.
The three local refineries together had a combined market share of 1.86%, equivalent to 75,482mt in 2019. This was an improvement over their 2018 position of a 1.65% share of the market, equivalent to 64,338mt.

Year-on-year Akwaaba Refinery grew its share from 1.00% in 2018 (equivalent to 38,755mt) to 1.27% in 2019 (equivalent to 51,392mt), representing a 33% increase in volumes supplied.

The Tema Oil Refinery increased its share of the market from 0.27% in 2018 (equivalent to 10,327mt) to 0.34% in 2019 (equivalent to 13,733mt), representing 33% growth in volumes supplied. Meanwhile, Platon Gas Oil Refinery's market share dropped from 0.39% in 2018 (equivalent to 15,257mt) to 0.26% in 2019 (equivalent to 10,356mt), representing a 32% fall in volumes.

Figure 73: Top 10 BDCs (2019).

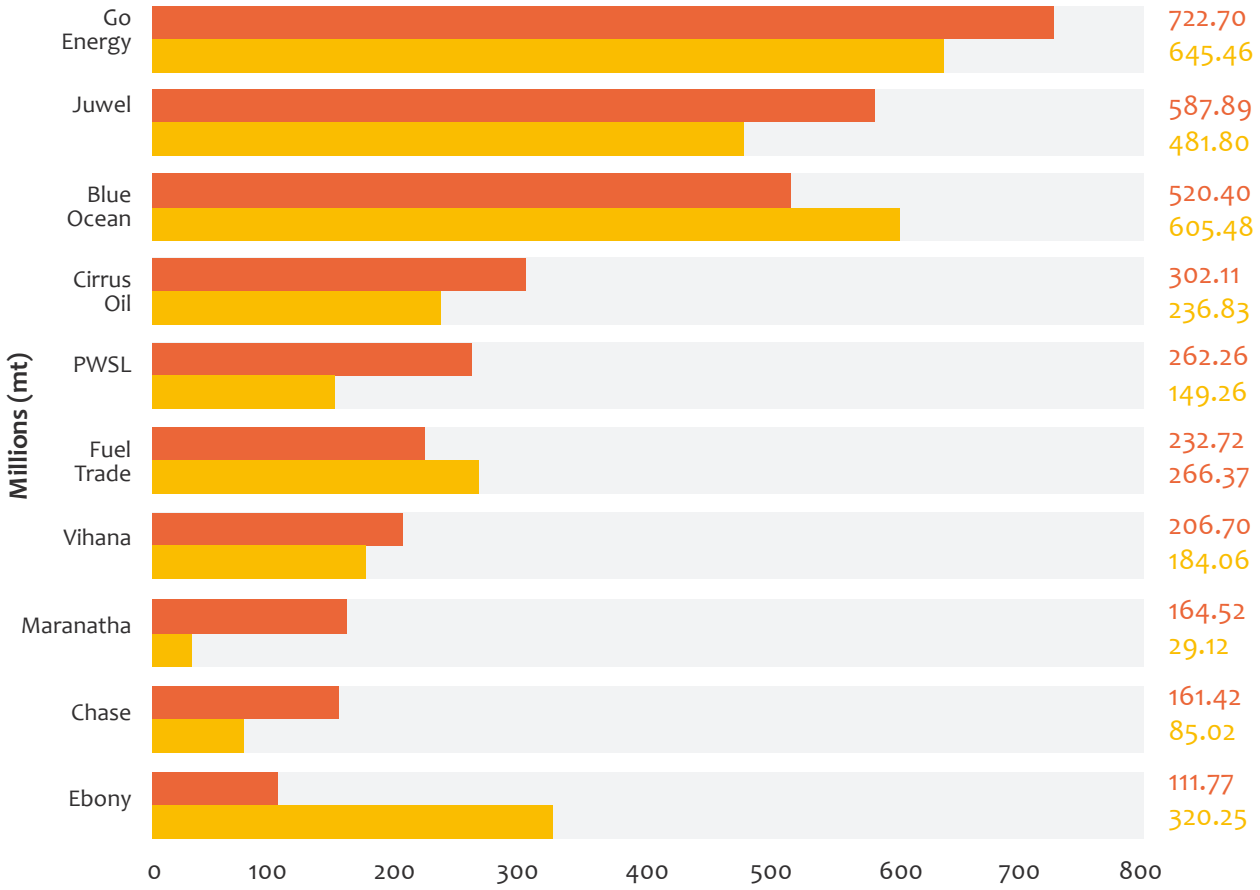
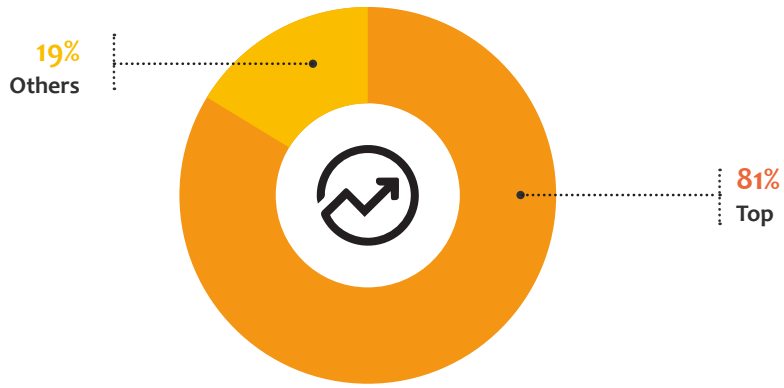
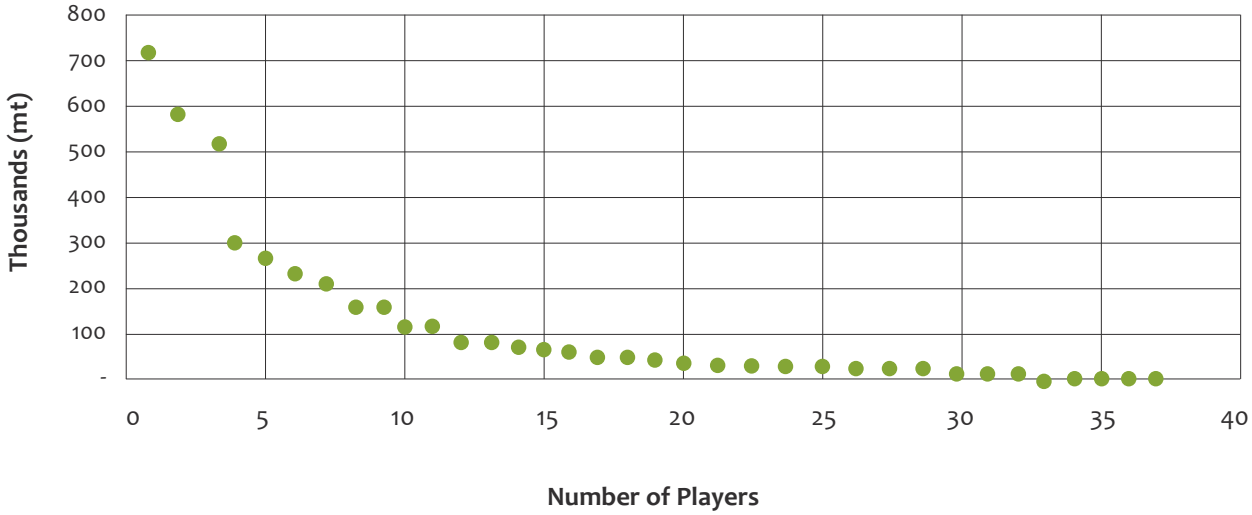


Figure 74: 2019 BDC Market Share - Top 10 vrs Others.



The BDC market was controlled by a few big players. In 2019, only three players sold products above 500,000mt, eight players sold products between 100,000 and 500,000mt while the rest sold products below 100,000mt. GoEnergy remained the biggest player with its market share increasing from 16.59% in 2018 to 17.80% in 2019, Juwel Energy's market share rose from 12.39% in 2018 to 14.48% in 2019, replacing Blue Ocean as the second largest distributor whose market share fell by 2.75% in 2019.

Figure 75: BDC Market Dispersion – (2019).



GoEnergy maintained its 5-year (2015-2019) run as the largest distributor of products with a 17.80% market share in 2019. This was a 1.21% increase over its 2018 market share. GoEnergy's distribution increased from 645,461mt in 2018 to 722,696mt in 2019. Its share dropped from 18.69% in 2017 to 16.59% in 2018 but rose to 17.80% in 2019 to further tighten its grip on the market. The rise in GoEnergy's market share in 2019 was largely propelled by increases in its share of gasoline and regular gasoil distribution from 20.36% and 17.79%, respectively, in 2018 to 21.91% and 20%, respectively, in 2019, and its LPG Domestic distribution from 4.33% in 2018 to 6.77% in 2019.

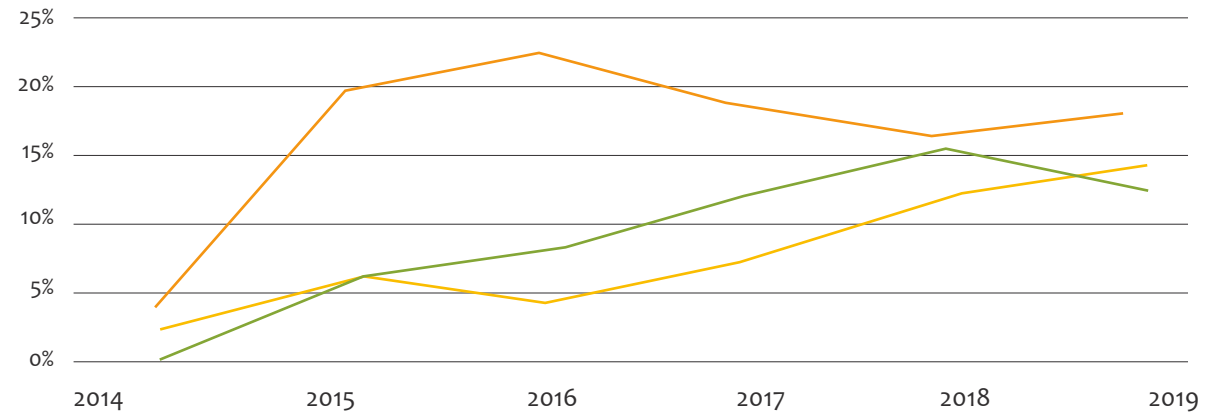
Blue Ocean, which ranked second in 2018, experienced a 14.05% decline in its distribution performance in 2019. This decreased its market share from 15.57% in 2018 to 12.82% in 2019. The fall in Blue Ocean's market share was accompanied by a 22.02% growth in the performance of Juwel Energy from 481,799mt in 2018 to 587,891mt in 2018. Juwel Energy's market share rose from 12.39% in 2018 to 14.48% in 2019, displacing Blue Ocean to rank second in 2019.

Juwel Energy and Blue Ocean have established themselves as key players in the BDC space. Over the past six years, Juwel Energy has increased its market share from as low as 1.85% in 2014 to 14.48% in 2019, moving significant volumes of gasoil, gasoline, ATK and industrial fuel in 2019.
Likewise, Blue Ocean has also witnessed a significant growth over the last six years, with its market share rising from 0.21% in 2014 to 12.82% in 2019, riding largely on the back of gasoil, gasoline, ATK, LPG domestic and fuel oil.

GoEnergy maintained its 5-year (2015-2019) run as the largest distributor of products with a 17.80% market share in 2019.

Juwel Energy and Blue Ocean have established themselves as key players in the BDC space. Over the past six years, Juwel Energy has increased its market share from as low as 1.85% in 2014 to 14.48% in 2019, moving significant volumes of gasoil, gasoline, ATK and industrial fuel in 2019.

Figure 76: GoEnergy vs Juwel vs Blue Ocean (2014-2019).



Go Energy	Juwel Energy	Blue Ocean Investments Limited
2014: 1.85%	2014: 1.85%	2014: 0.21%
2015: 3.48%	2015: 5.01%	2015: 5.24%
2016: 22.14%	2016: 3.90%	2016: 8.18%
2017: 18.69%	2017: 6.51%	2017: 12.71%
2018: 16.59%	2018: 12.39%	2018: 15.57%
2019: 17.80%	2019: 14.48%	2019: 12.82%

7.4.1 Gasoil

A total of 1.9mn mt of gasoil was distributed for the period under review. This was 3.75% higher than the volumes sold in 2018. This included regular gasoil (1.51mn mt), gasoil rig (75,939mt), gasoil mines (283,564mt), MGO foreign (7,215mt) and MGO local (25,671mt).

The top five regular gasoil distributors in 2019 (GoEnergy, Juwel, Blue Ocean, Vihama and Cirrus Oil) sold a total of 937,605mt, representing 61.96% of the total market share. 11 players participated in the sale of gasoil to the mines in 2019 as compared to the 13 recorded for 2018.

PWSL maintained its position as the leading distributor of gasoil (mines) in 2019 with 153,124mt representing 54.00% of the total gasoil mines distribution. This represents a 23.08% increase over the 124,411mt it distributed in 2018. Only five players (GoEnergy, Cirrus Oil, Fuel Trade, Blue Ocean and PWSL) were active in the sale of gasoil rig in 2019, as compared to three in 2018. GoEnergy replaced Cirrus Oil as the largest distributor of gasoil rig in 2019, after losing its position to Cirrus in 2018, increasing its volumes sold from 43,874mt in 2018 to 56,907mt in 2019.

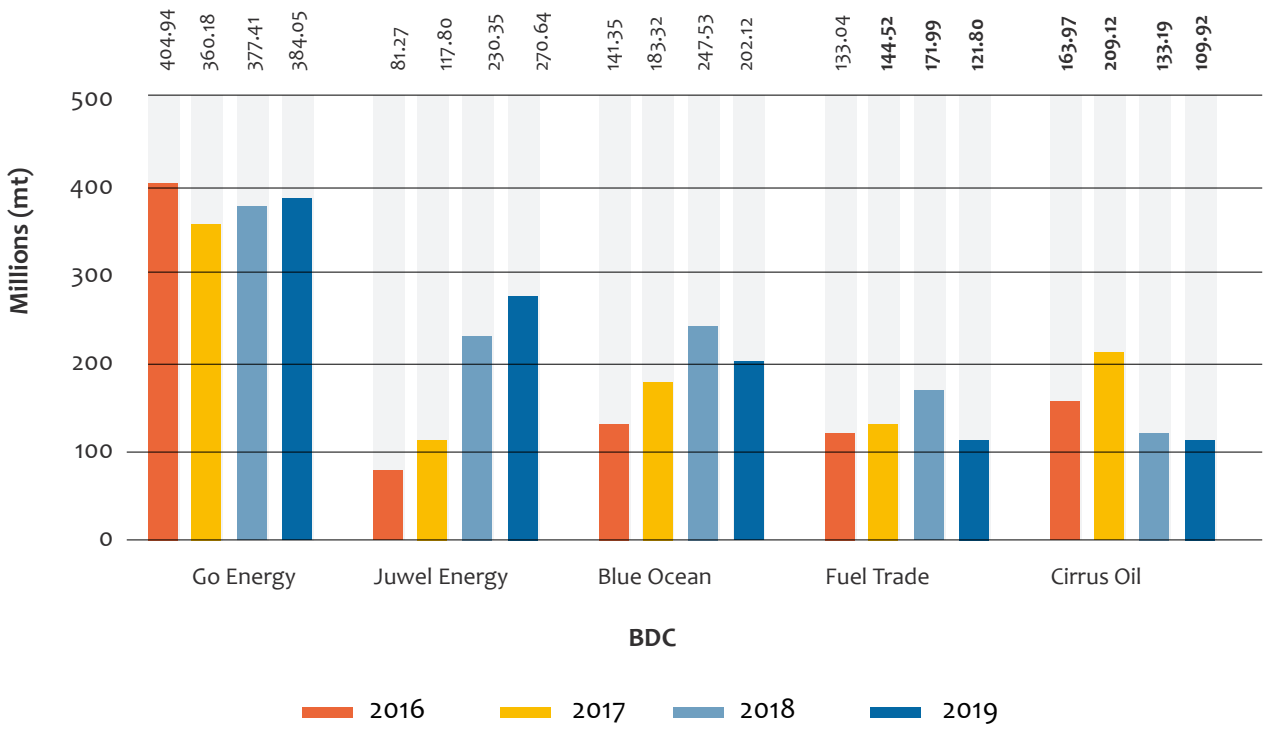
A total of 15 companies distributed MGO local while seven companies distributed MGO foreign in 2019 compared to the 21 companies who distributed MGO local and 11 who distributed MGO foreign in 2018.

For the MGO local space, GoEnergy remained the largest distributor with total volumes of 7,772mt, representing 30.28% of the total market share. Tema Oil Refinery replaced Blue Ocean as the largest distributor of MGO foreign

A total of 15 companies distributed MGO local while seven companies distributed MGO foreign in 2019 compared to the 21 companies who distributed MGO local and 11 who distributed MGO foreign in 2018.

in 2019, increasing its market share from 0% in 2018 to 35.25% in 2019. Juwel Energy, which was the third largest distributor for 2018, displaced Blue Ocean to rank second in 2019. Juwel Energy's success is driven largely by the increase in the volume of its gasoil regular distribution from 208,466mt in 2018 to 260,114mt in 2019, a 24.78% increase over the period.

Figure 77: Top 5 Gasoil Distributors (2016-2019).



7.4.2 Gasoline

A total of 1.35mn mt of gasoline was distributed in 2019, 7.21% higher than in 2018. The top five distributors of gasoline were GoEnergy (21.91%), Juwel Energy (17.37%), Blue Ocean (11.39%), Cirrus (6.95%) and Maranatha (6.74%). Together they distributed a total of 866,053mt, representing 64.36% of the total market share. Maranatha Oil replaced Chase Petroleum as the fifth largest gasoline distributor in 2019. From a volume of 11,573.80mt sold in 2018, Maranatha Oil increased its distribution to 90,663.27mt in 2019, representing a 683.35% growth. Its market share also rose by 5.82% in 2019. All the other top five players experienced an increase in their market shares in 2019, except Blue Ocean, whose market share declined marginally from 11.80% in 2018 to 11.39% in 2019. For the fourth consecutive year, GoEnergy maintained its spot as the leader in the distribution of gasoline, with Juwel Energy coming second followed by Blue Ocean and Cirrus Oil in that order.

For the fourth consecutive year, GoEnergy maintained its spot as the leader in the distribution of gasoline, with Juwel Energy coming second followed by Blue Ocean and Cirrus Oil in that order.

Figure 78: Top 5 Gasoline Distributors (2016-2019).

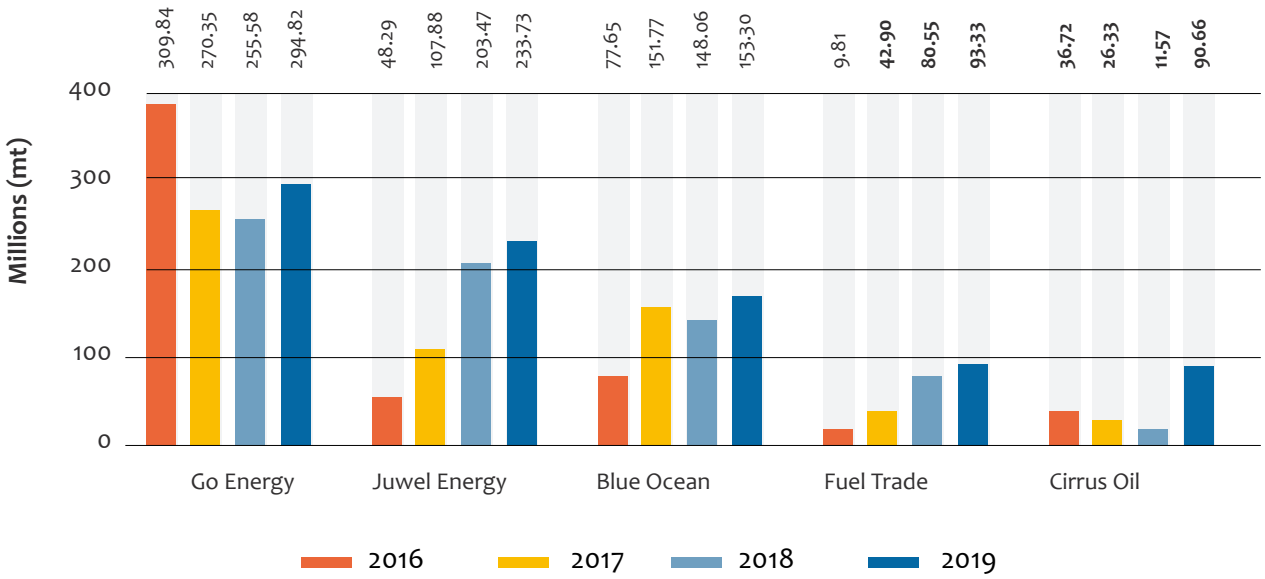
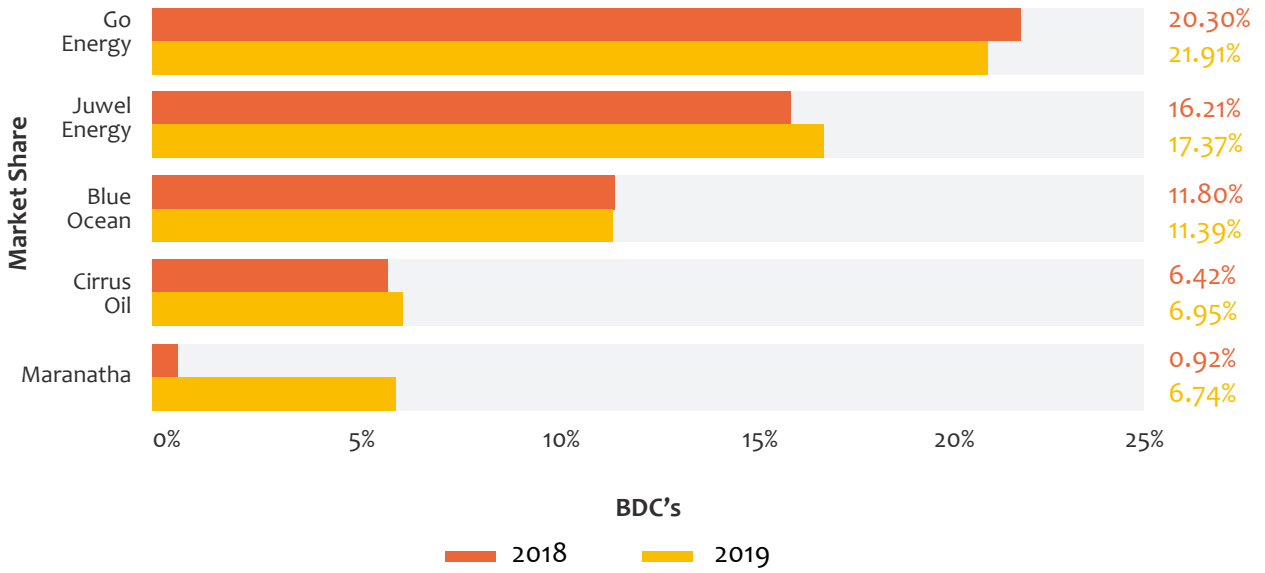


Figure 79: Top 5 Gasoline Distributors (2016-2019).

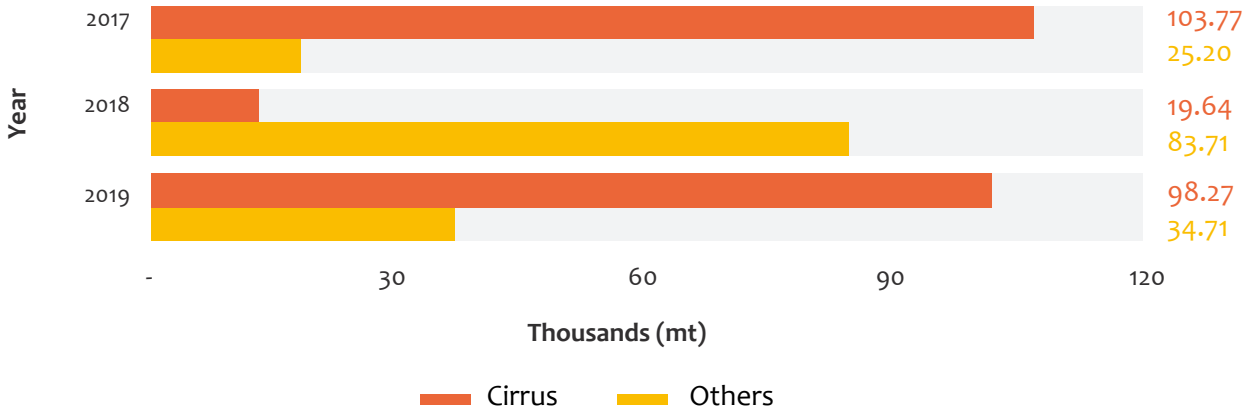


7.4.3 Fuel Oil for Power

Cirrus Oil reclaimed its position as the leader in the distribution of fuel oil for power in 2019, having lost its position in 2018 to Blue Ocean. Out of a total of 132,983 mt of fuel oil for power distributed in 2019, 98,272mt was supplied by Cirrus Oil, representing 74% of the market. This represents a 400% growth over the company's 2018 distribituion (19,640mt). All other distributors in 2019 sold products below 35,000mt.

Cirrus Oil's comparative advantage lies in its vertical integration of the supply chain with Tel Energy as its OMC, with a complete dominance of the fuel oil market. Tel Energy sold a total of 121,062 mt to the power plants in 2019.

Figure 80: Cirrus Oil vs Others 2017 - 2019

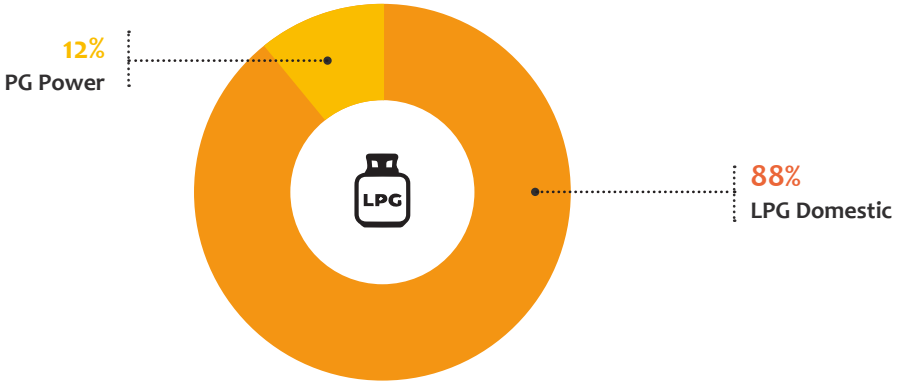


7.4.4 LPG

A total of sixteen (16) BDCs distributed LPG in 2019 as compared to 12 in 2018. Out of the 340,150mt of LPG distributed, 299,575mt, representing 88.07% of LPG distribution was domestic consumption while 40,575mt was distributed to the power sector. The largest distributor of LPG in 2018, Dome Energy, lost its position to Fueltrade Limited in 2019. This was because of the marked decline in demand for LPG for power from 108,482mt in 2018 to 40,575mt in 2019, which is mainly supplied by Dome Energy.

However, in the distribution of LPG for power, Dome Energy held a 100% market share.

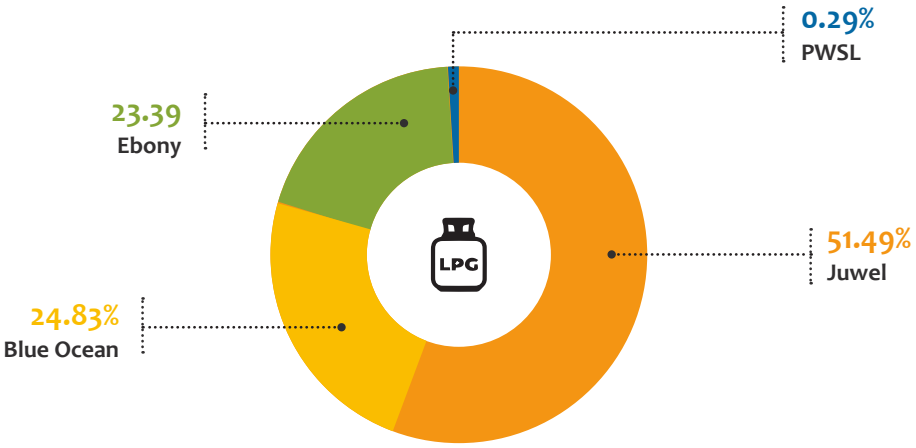
Figure 81: LPG Domestic vs LPG Power (2019).



7.4.5 Kerosene

Only four companies (Ebony, Blue Ocean, PWSL and Juwel Energy) distributed kerosene in 2019 totalling 3,783mt. There was a 23.82% drop in the distribution of Kerosene from 4,966mt in 2018 to 3,783mt in 2019.

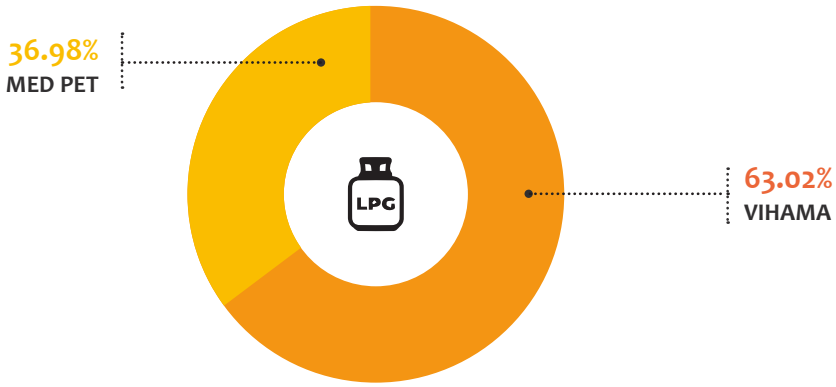
Figure 82: Kerosene Distributors (2019).



7.4.6 Premix

There were only two distributors of Premix in 2019: Vihama and Med Petroleum as compared to three in 2018. Vihama maintained its position as the leader in premix distribution, supplying about 63.02% (equivalent 34,288mt) of the total premix consumed in the country. Med Petroleum supplied below 21,000mt representing 36.98%.

Figure 83: Premix Distributors (2019).



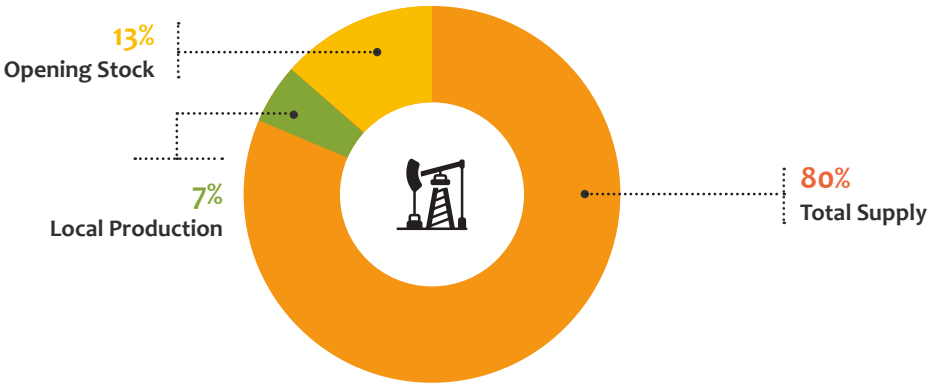
Only four companies (Ebony, Blue Ocean, PWSL and Juwel Energy) distributed kerosene in 2019 totalling 3,783mt.

There were only two distributors of Premix in 2019: Vihama and Med Petroleum as compared to three in 2018.

7.5 Supply

Total petroleum product supply reached 5.48mn mt in 2019. This comprised imports of 4.38mn mt, local production of 717,235mt and an opening stock position of 379,553mt. The 2019 supply was 28% higher than 2018 which had a total supply position of 4.27mn mt.

Figure 84: Total Supply Breakdown (2019)



7.6 Production

Local refinery production accounted for 13% of total supply in 2019. Local production represents output from the Tema Oil Refinery, Akwaaba Refinery, Platon Gas Oil and the Ghana National Gas Company (GNGC). Products refined from TOR amounted to 563,598mt representing a 106% increase over its 2018 refinery production of 273,658mt.

Total production from TOR accounted for 79% of total refinery production. Akwaaba and Platon's output were 52,400mt (a 61% increase over the previous year's) and 14,627mt (a 32% increase over the previous year's) respectively. Their refinery production accounted for 7% and 2% respectively of total production. GNGC's output (LPG & Condensate only) was 86,610mt representing 12% of total refinery output.

Ghana witnessed a significant improvement in refinery output in 2019 compared to 2018.

Refinery output rose to 717,235mt in 2019 from 401,459mt in 2018, marking a 79% increase in output. The surge in local refinery output rose largely on the back of TOR's production, alongside the marginal increases in output refined by Akwaaba, GNGC and Platon.

TOR's operation in 2019 is a stark improvement from its 2017 operations when an explosion destroyed one of its two furnaces.

Products Refined from TOR

563,598mt
2019

273,658mt
2018

106% INCREASE

Ghana's Refinery output

717,235mt
2019

401,459mt
2018

79% INCREASE

Petroleum products produced from local refineries in 2019 included LPG, gasoline, gasoil, Kerosene, Aviation Turbine Kerosene (ATK), Residual Fuel Oil (RFO), Naphtha and Condensates.

RFO was the largest product obtained from refinery operations in 2019, with its share of refinery output at 205,162mt (29%) of total production, closely followed by gasoil (which was 2018's largest refined product) with a share of 198,126mt (28%). Other products realised from the refinery process included ATK, Kerosene, Naphtha, LPG and Condensate.

Figure 85: Total Refinery Output (2016-2019).

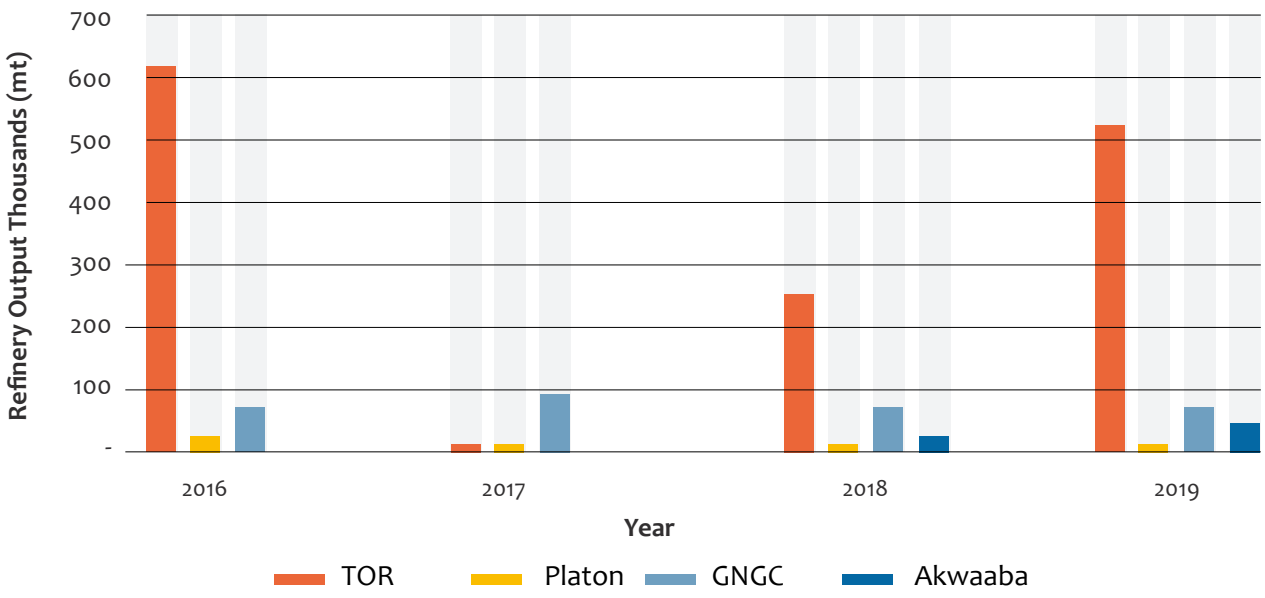
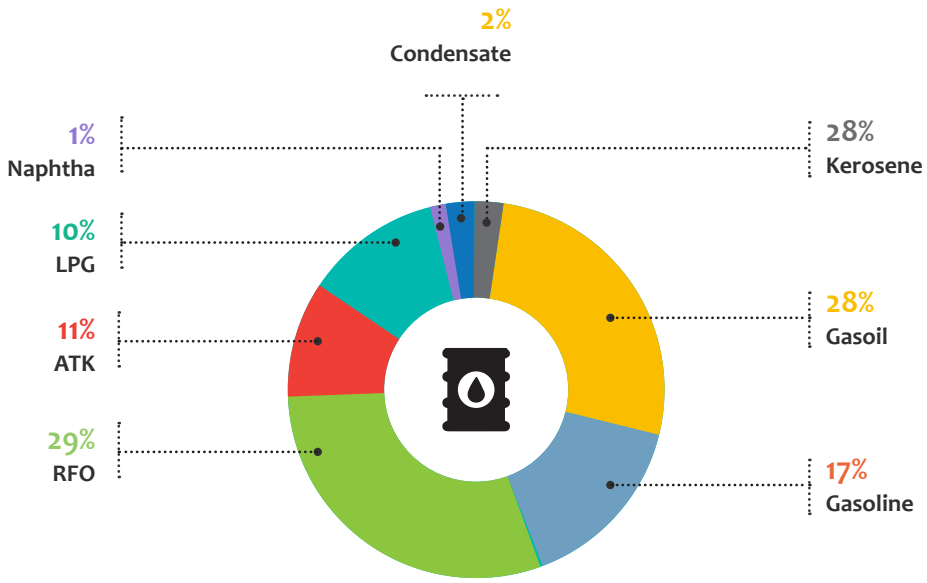


Figure 86: Refinery Output - 2019.



7.7 Imports

Imports of crude oil and refined products increased in 2019 relative to 2018. Total imports of crude oil and refined products reached 4.38mn mt in 2019. Crude oil imports accounted for 18% (792,593.80mt) while petroleum products accounted for 82% of total imports.

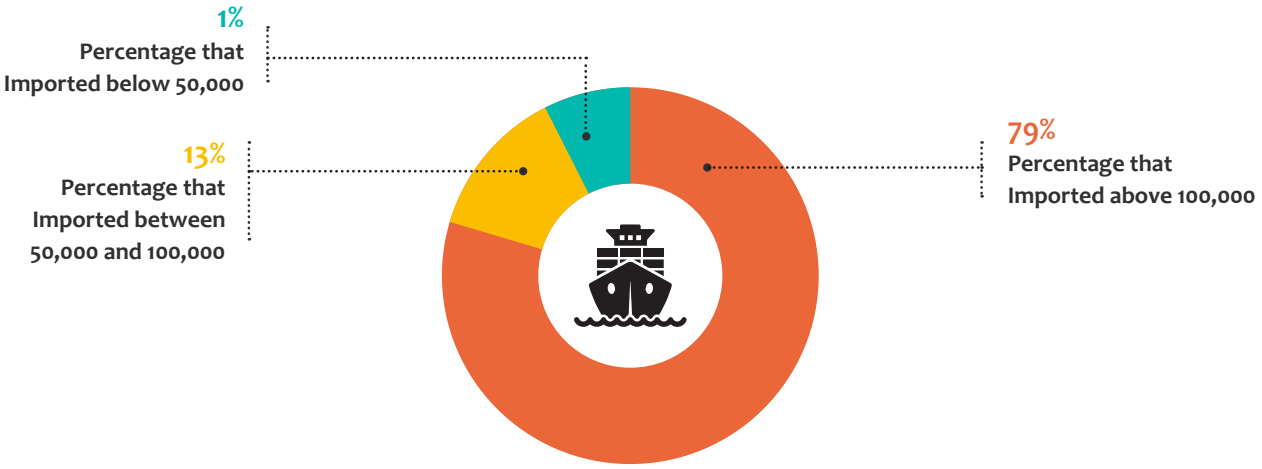
Refined product imports went up by 2% in 2019 relative to 2018 volumes, increasing from 3.52mn mt in 2018 to 3.59mn mt in 2019. This included an increase in the imports of LPG and ATK, although major products like gasoline and gasoil saw a 3% drop each in import volumes.

A total of 35 companies imported products in 2019, one more than the number of importers in 2018; 11 companies imported products above 100,000mt accounting for 79% of total imports relative to nine companies 2018. Seven companies imported products above 50,000mt but below 100,000mt to account for 13% of imports. Seventeen (17) companies brought in cargoes below 50,000mt accounting for 8% of total imports.

There was an improvement in the number of importers who brought in products equivalent to the standard single cargo size of 30kt when compared to 2018. In 2019, as many as 24 companies imported products above 30kt as compared to 19 in 2018.

The number of players who imported products below 50,000 mt have also reduced significantly from 32 players in 2017 to 18 players in 2018 and 17 in 2019. This is an indication of an increase in the level of productivity within the import market.

Figure 87: BDC Import Distribution (2019)



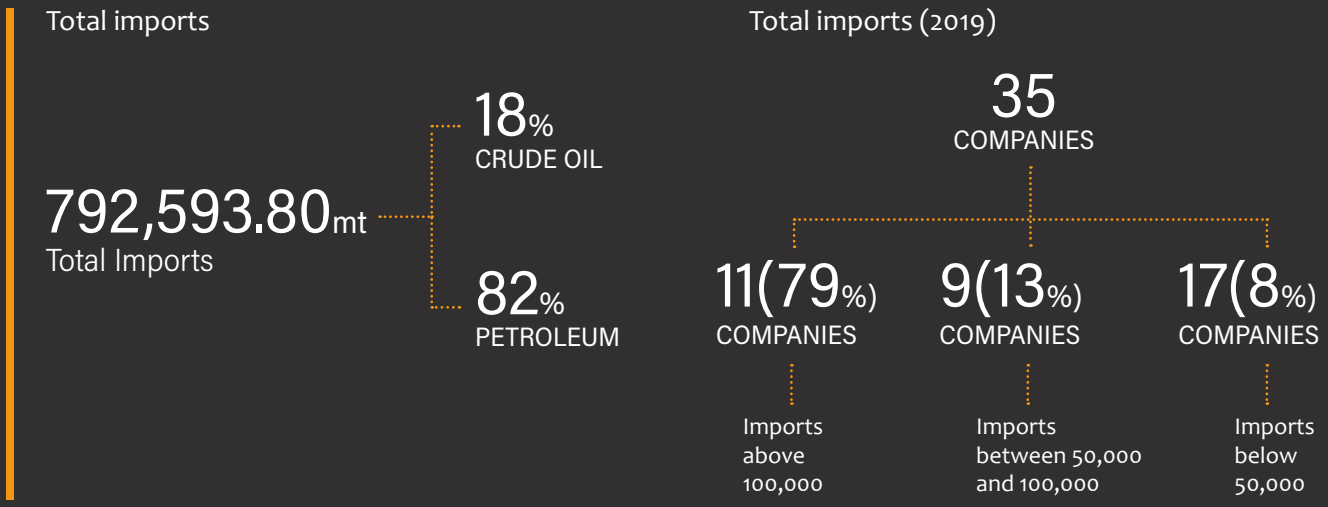
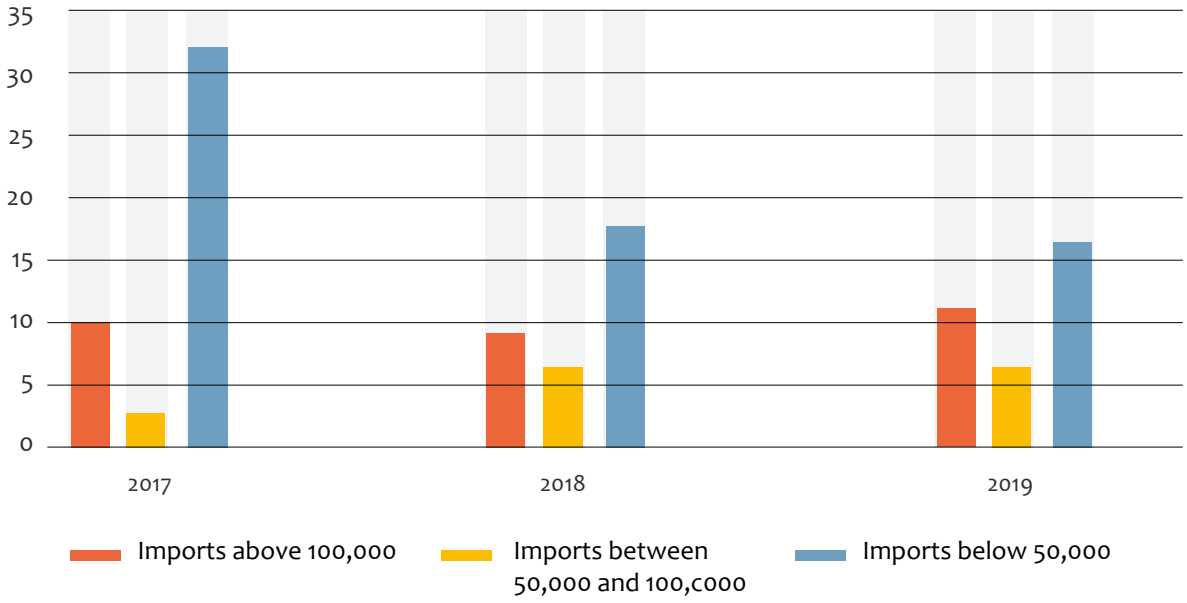


Figure 88: Importers Activity 2017 - 2019.



The top 10 importers accounted for 76.3% of total imports in 2019. Blue Ocean lost its position as the largest importer of products to GoEnergy.

The latter imported as much as 617,074.96mt in 2019, with gasoil accounting for about 48.6% of its total imports. Woodfields, the new entrant into the top 10 importers, was the second largest importer in 2019. It had a comparative advantage in the imports of light crude oil, importing 515,712.79mt of crude oil which represents 65% of total crude oil imports into the country for the year under review.

Other major importers included Fueltrade (6%), Cirrus Oil (5%), Vihama (5%) and Stratcon (4%).

A total of 792,593.80mt of crude oil equivalent to 5.8mn bbls was imported in 2019. Five importers brought in crude oil in 2019 relative to the two in 2018.

About 16% (123,353mt) of this was committed to the power sector and 84% (669,240mt) to refining. Importers of crude oil in 2018 included Woodfileds, Stratcon, Adinkra, Akwaaba and Platon.

617,974mt
Go ENERGY

48.6%
OF IT'S TOTAL IMPORTS

515,712mt
WOODFIELDS

65%
OF IT'S TOTAL IMPORTS

Other major importers

6%
FUELTRADE

5%
CIRRUS

5%
VIHAMA

4%
STRATCON

Figure 89: Top 10 Importers (2018 - 2019)

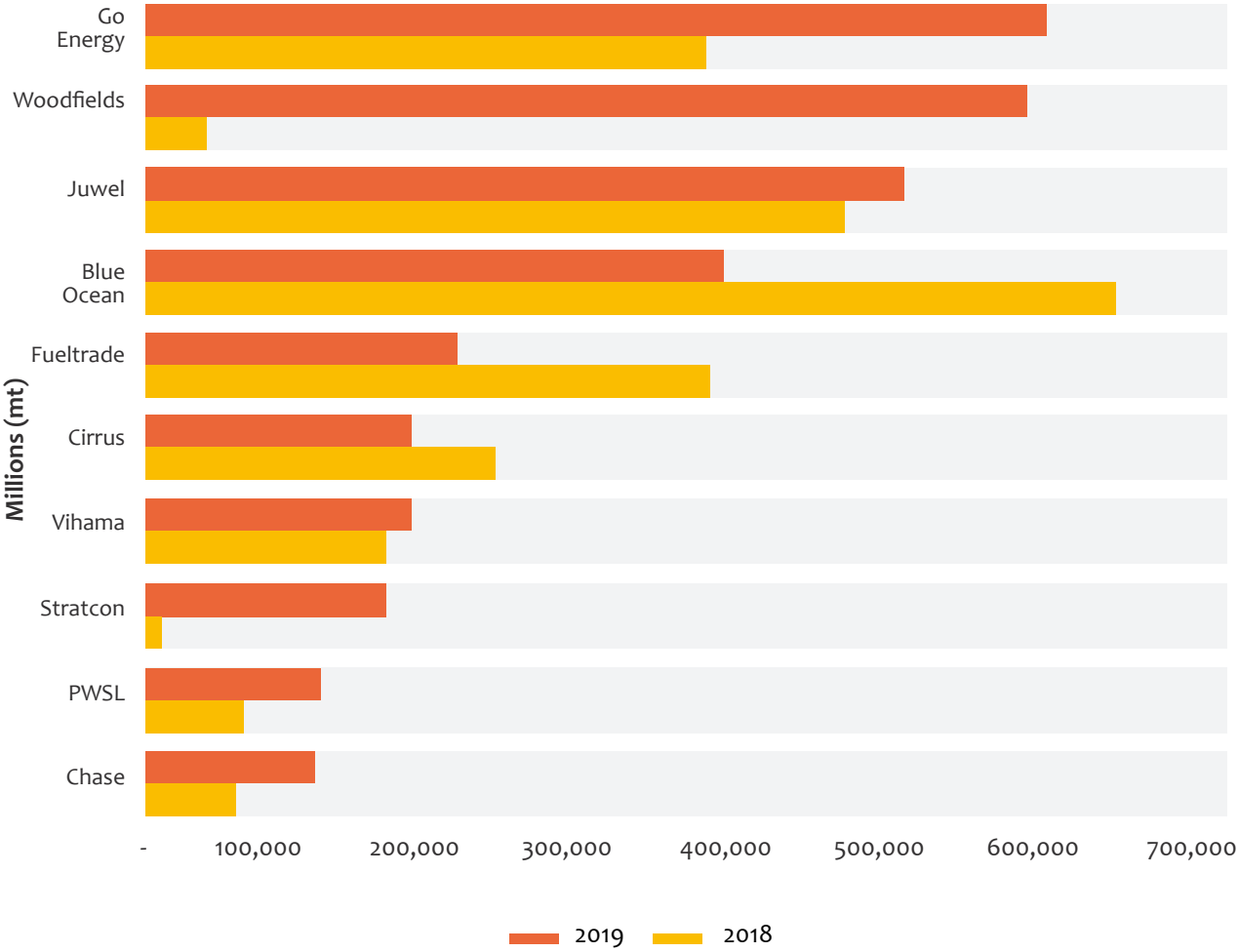
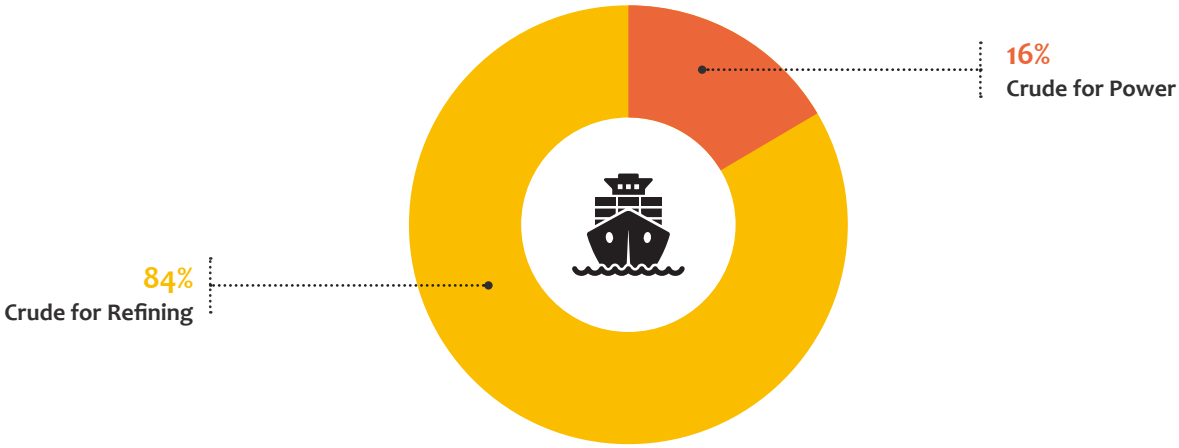


Figure 90: Crude Imports (2019)



7.8 Exports

Refined products were exported to four (4) countries in 2019. These were Burkina Faso, Mali, Togo and Niger. A total of 292,614mt of refined products were exported. This was made up of 117,445mt of gasoil, 33,211mt of gasoline, 768mt of LPG, 74,983mt of Naptha and 66,207mt Fuel Oil. A total of 151,424mt was imported for re-export[224] while 141,190mt was refined locally and exported .[225]

Out of the 151,424mt of re-exports in 2019 Burkina Faso was the main destination for petroleum product export, accounting for 96% of total exports. Mali and Niger accounted for 3% and 1% respectively while products sent to Togo were below 1%.

224 Re-export volumes refer to volumes of petroleum products imported into the country for onward export.
225 Refinery export volumes refers to volumes of petroleum products produced locally and exported.

Figure 91: Petroleum Product Exports 2019.

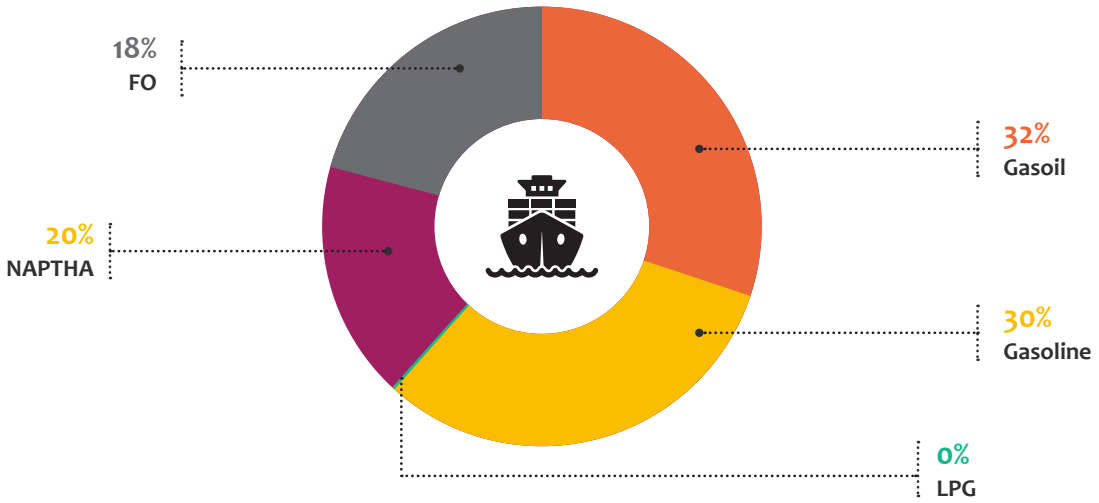
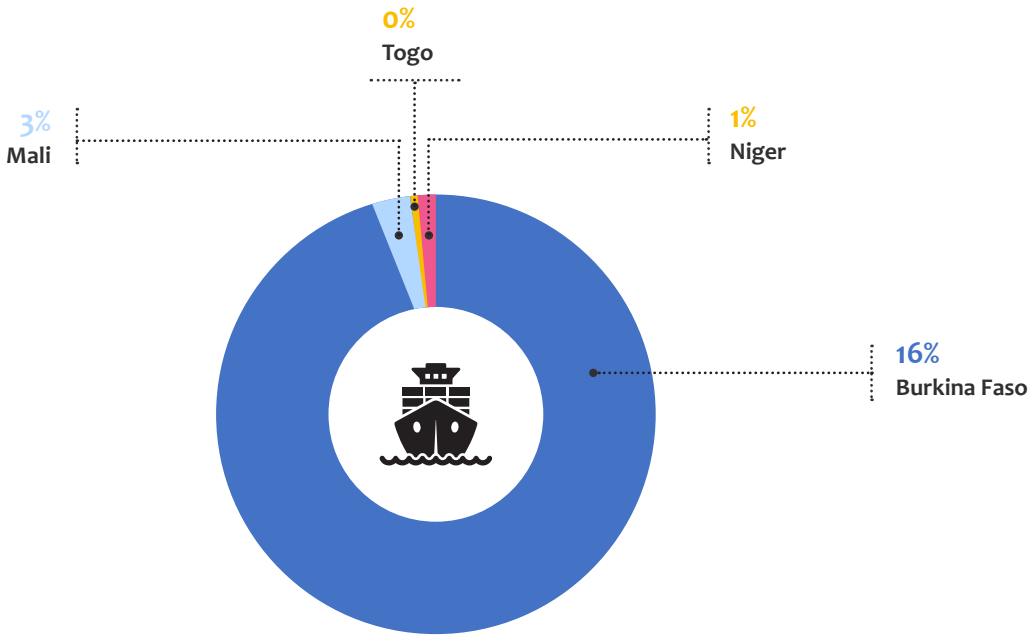


Figure 92: Export Destination.



7.9 Pricing Review

Brent crude price ranged between $55.78/bbl and $72.15/bbl, and averaged $63.66/bbl (an 11% decrease over the 2018 average of $71.54/bbl). The lowest price was recorded in the second window of January while the highest price was recorded in the first window of June. Changes in prices during the year were triggered by a number of factors including production cuts by OPEC, weakened demand from Asia as well geo-political tensions and trade wars between China and USA.

The average FOB price of gasoline for the year 2019 ranged between $498.25/mt and $749.68/mt, and averaged $607.78/mt (a 10% decrease over the 2018 average of $677.85/mt). The lowest price was recorded in the second window of January while the highest price was recorded in the first window of June.

The average FOB price of gasoil for the year 2019 ranged between $533.08/mt and $639.88/mt, and averaged $587.08/mt (an 8% decrease over the 2018 average of $641.51/mt). The lowest price was recorded in the second window of January while the highest price was recorded in the first window of June.

The average FOB price of LPG for the year 2019 ranged between $271.40/mt and $492.73/mt, and averaged $403.56/mt (a 21% decrease over the 2018 average of $511.88/mt). The lowest price was recorded in the second window of August while the highest price was recorded in the second window of April.

The average FOB price of Aviation Turbine Kerosene (ATK) for the year 2019 ranged between $581.08/mt and $673.35/mt, and averaged $628.83/mt (a 9% decrease over the 2018 average of $687.87/mt). The lowest price was recorded in the second window of January while the highest price was recorded in the first window of June.

The average FOB price of Residual Fuel Oil (RFO) for the year 2019 ranged between $342.00/mt and $424.61/mt, and averaged $395.10/mt (a 4% decrease over the 2018 average of $410.76mt). The lowest price was recorded in the first window of January while the highest price was recorded in the second window of July.

Petroleum product prices were affected by global demand and supply shocks including inventory build-up and changes in production levels from refineries globally.

Figure 93: Trend of Finished Products FOB Prices (January - December 2019).

Figure 94: Trend of Finished Products FOB Prices (January - December 2019).

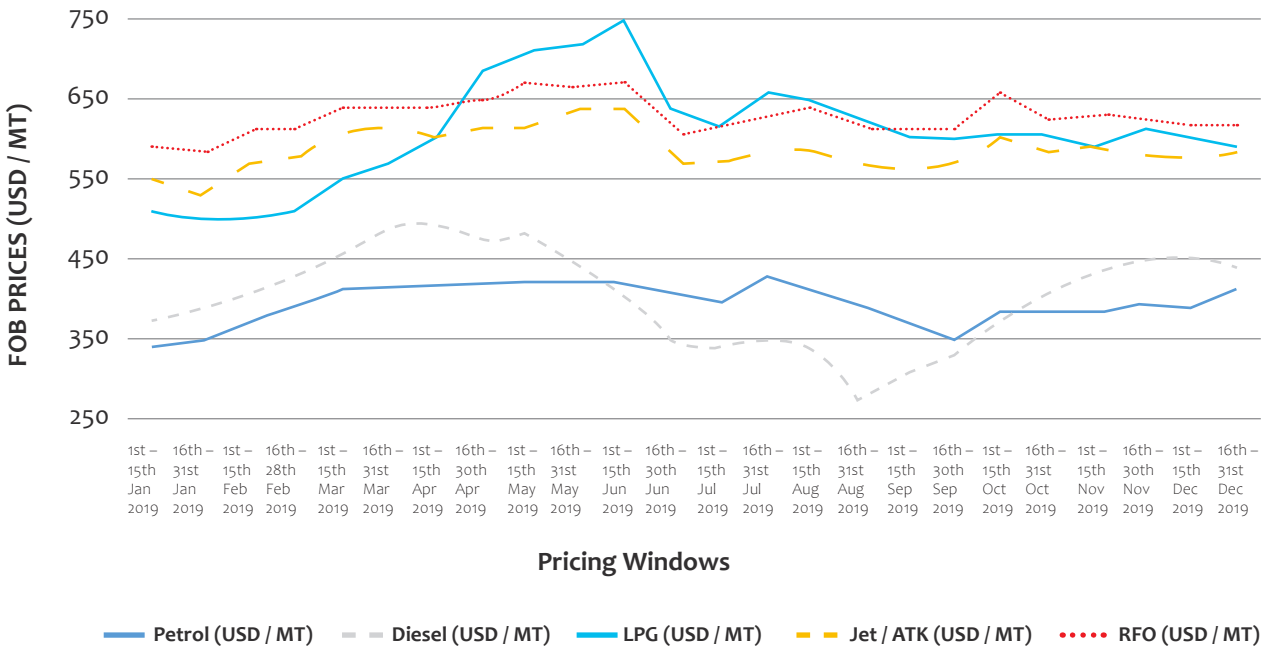


Table 28 (next 2 pages) shows the FOB prices of Dated Brent and finished products for the year 2019.

The largest drop in the FOB price of gasoline occurred in the second window of June when prices fell by 15% from $749.68/mt in the first window to $638.30/mt in the second window of June.

The largest rise in gasoline's FOB price occurred in the second window of April, when prices shot up by almost 13% from $606.02/mt in the first window of April to $684.63/mt in the second window of April. In the case of gasoil, the largest drop occurred between the first and second selling windows of June, when prices dropped by almost 11% from $639.88/mt to $570.25/mt. The first selling window of February saw the largest price increase for gasoil, when prices increased by 6.32% from $533.08/mt in the second selling window of January to $566.78/mt in the first selling window of February.

It is worth noting that the second selling window of June saw significant drops in the prices of all refined products. This could be attributed to the 9.50% fall (the largest drop of the year) in the price of crude oil for the same period all things being equal.

The largest drop in the FOB price of gasoline occurred in the second window of June when prices fell by 15% from $749.68/mt in the first window to $638.30/mt in the second window of June.

Figure 95: Average Gasoline Inter Window Changes (2019).

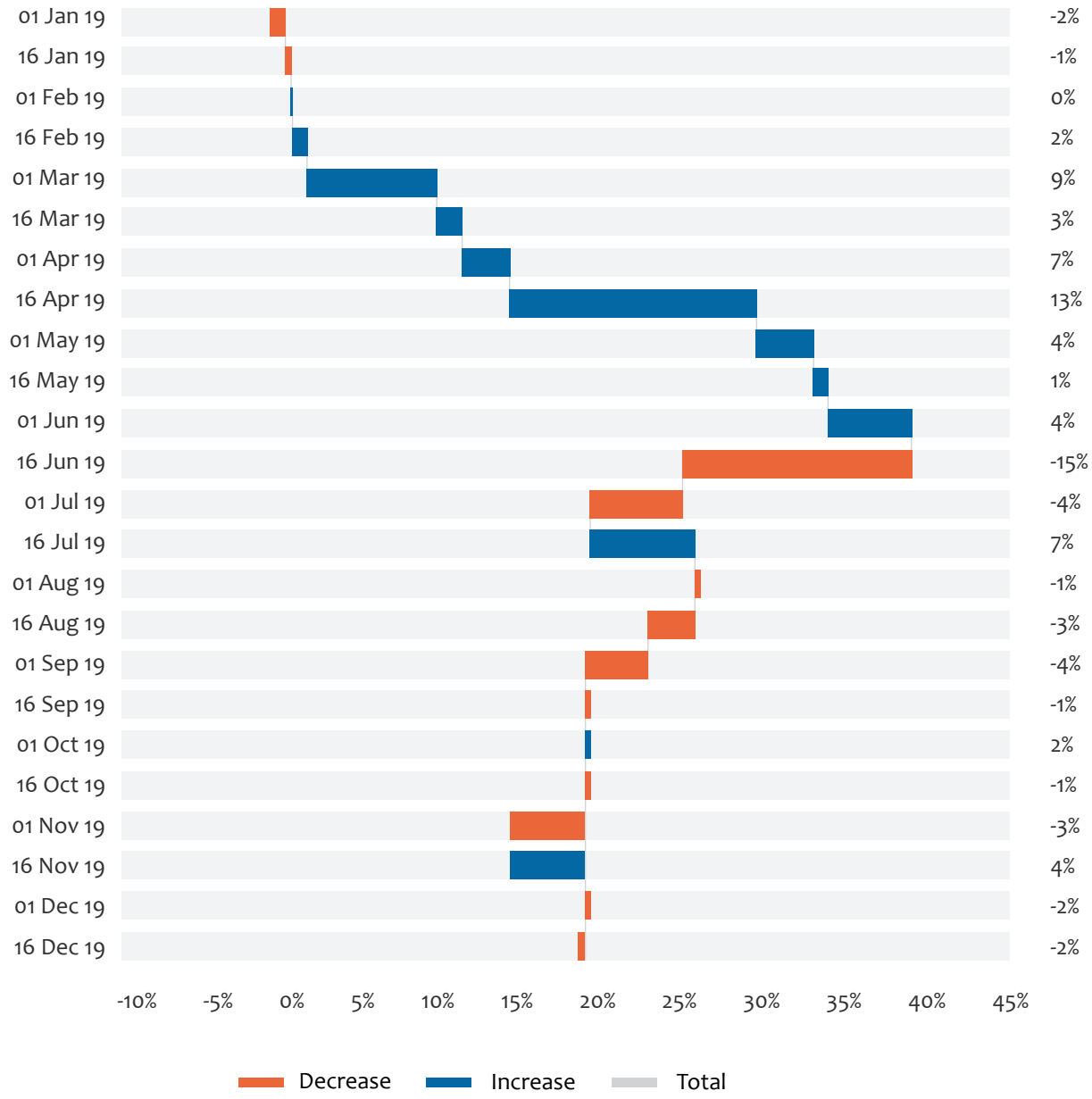


Table 28: Trend of Finished Products FOB Prices (January - December 2019)

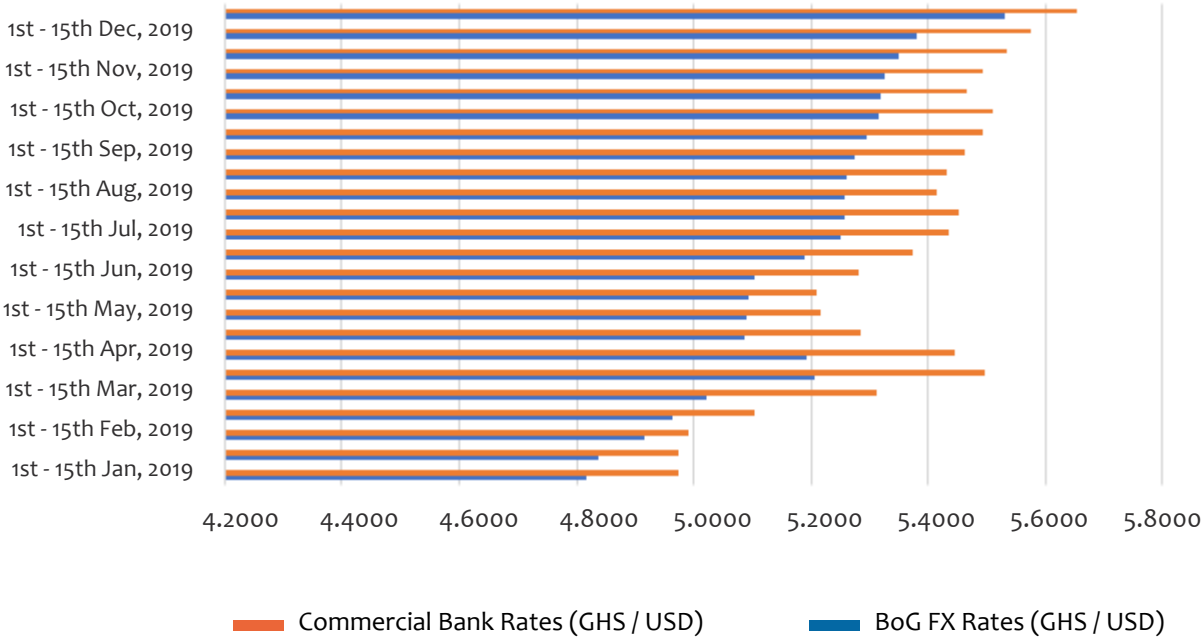
Pricing Window 2019	Petrol (USD / MT)	%age Change	Diesel (USD / MT)	%age Change	LPG (USD / MT)	%age Change	Jet/ATK (USD / MT)	%age Change	RFO (USD / MT)	%age Change	Brent Dated (USD / BBL)	%age Change
1st - 15th Jan	504.09	-	545.63	-	375.50	-	588.28	-	342.00	-	56.55	-
16th - 31st Jan	408.25	-1.16%	533.08	-2.30%	384.30	2.34%	581.08	-1.22%	348.98	2.04%	55.78	-1.35%
1st - 15th Feb	500.23	0.40%	566.78	6.32%	406.25	5.71%	608.25	4.68%	373.15	6.93%	60.65	8.72%
16th - 28th Feb	507.86	1.53%	576.93	1.79%	427.09	5.13%	612.27	0.66%	390.00	4.52%	61.67	1.69%
1st - 15th Mar	552.61	8.81%	609.00	5.56%	460.73	7.88%	640.25	4.57%	411.55	5.52%	65.23	5.78%
16th - 31st Mar	567.78	2.74%	616.58	1.24%	492.36	6.87%	644.06	0.59%	413.78	0.54%	64.55	-1.04%
1st - 15th Apr	606.02	6.74%	606.16	-1.69%	492.73	0.07%	645.27	0.19%	415.02	0.30%	66.90	3.63%
16th - 30th Apr	634.63	12.97%	614.77	1.41%	473.61	-3.88%	652.35	1.10%	416.73	0.41%	69.57	4.00%
1st - 15th May	709.42	3.62%	614.77	0.00%	481.11	1.58%	669.81	2.68%	422.36	1.35%	72.05	3.57%
16th - 31st May	718.19	1.24%	636.97	3.61%	442.39	-8.05%	666.08	-0.56%	421.53	-0.20%	71.38	-0.94%
1st - 15th Jun	749.68	4.38%	639.88	0.46%	408.75	-7.60%	673.35	1.09%	419.85	-0.40%	72.15	1.09%
16th - 30th Jun	638.30	-14.86%	570.25	-10.88%	353.50	-13.52%	607.52	-9.78%	405.09	-3.52%	65.30	-9.50%
1st - 15th Jul	613.91	-3.82%	570.09	-0.03%	338.68	-4.19%	614.91	1.27%	397.32	-1.92%	64.09	-1.85%
16th - 31st Jul	654.68	6.64%	583.84	2.41%	346.39	2.27%	634.05	3.11%	424.61	6.87%	64.97	1.37%
1st - 15th Aug	648.98	-0.87%	584.73	0.15%	339.20	-2.07%	642.07	1.26%	406.32	-4.31%	63.75	-1.88%
16th - 31st Aug	627.82	-3.26%	568.30	-2.81%	271.40	-19.99%	616.78	-3.94%	395.68	-2.62%	60.09	-5.73%
1st - 15th Sep	605.00	-3.63%	561.68	-1.1%	310.68	14.47%	607.25	-1.55%	368.43	-6.89%	58.89	-2.00%
16th - 30th Sep	599.25	-0.95%	573.31	2.07%	326.25	5.01%	615.06	1.29%	353.58	-4.03%	60.94	3.48%
1st - 15th Oct	608.48	1.54%	603.64	5.29%	365.75	12.11%	655.93	6.64%	384.16	8.65%	63.81	4.71%
16th - 31st Oct	605.11	-0.55%	582.02	-3.58%	409.59	11.99%	628.27	-4.22%	387.07	0.76%	59.67	-6.49%
1st - 15th Nov	586.05	-3.15%	587.93	1.01%	437.58	6.83%	628.90	0.10%	386.25	-0.21%	59.98	0.52%
16th - 30th Nov	610.66	4.20%	583.52	-0.75%	448.91	2.59%	624.27	-0.74%	393.82	1.96%	61.38	2.33%
1st - 15th Dec	599.36	-1.85%	579.36	-0.71%	450.11	0.27%	618.68	-0.90%	392.39	-0.36%	63.31	3.16%
16th - 31st Dec	590.32	-1.51%	580.70	0.23%	442.70	-1.65%	617.16	-0.25%	412.77	5.19%	65.18	2.94%
Min	498.25		533.08		271.40		581.80		342.00		55.78	
Max	749.68		639.88		492.73		673.35		424.61		72.15	
Average	607.78		587.08		403.56		628.83		395.10		63.66	
Total Decreases		-35.62%		-23.92%		-60.95%		-23.13%		-24.45%		-30.77%
Total Increases		54.81%		31.58%		85.13%		29.18%		45.04%		46.97%
Net Change		19.19%		7.66%		24.18%		6.04%		20.59%		16.19%

7.10 Exchange Rate

The GHS/$ exchange rate monitored from the Bank of Ghana for the period ranged between GHS4.8183/US$ and GHS5.5312/US$ and averaged GHS5.1804/US$. The lowest exchange rate was recorded in the first window of January, while the highest exchange rate was recorded in the second window of December. The Bank of Ghana's Interbank selling rate monitored throughout the year saw a net depreciation of 13.97%. The GHS/$ exchange rate monitored from the Commercial Banks (Barclays, Stanbic and Standard Chartered) for the period ranged between GHS4.9731/US$ and GHS5.6550/US$ and averaged GHS5.3575/US$. The lowest exchange rate was recorded in the first window of January while the highest exchange rate was recorded in the second window of December. The average commercial banks' exchange rate monitored throughout the year saw a net depreciation of 13.13%.

The commercial bank selling rate for 2019 averaged GHS5.3575/US$, marking a 14% increase over the 2018 average of GHS4.6828/US$. The average commercial banks' exchange rate for the year was about 3 percentage points higher than the average BOG interbank selling rate of GHS5.1804/US$.

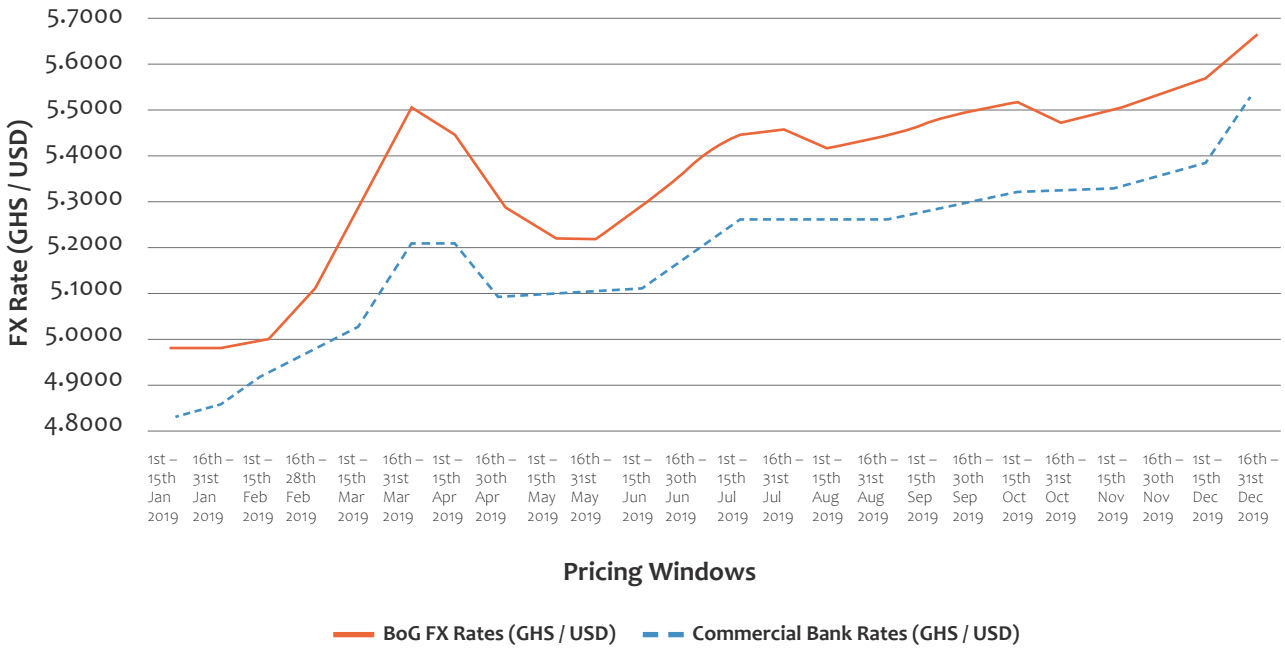
Figure 96: FX Rates GHS/$ (2019).



The Bank of Ghana's Interbank selling rate monitored throughout the year saw a net depreciation of 13.97%. The GHS/$ exchange rate monitored from the Commercial Banks (Barclays, Stanbic and Standard Chartered) for the period ranged between GHS4.9731/US$ and GHS5.6550/US$ and averaged GHS5.3575/US$.

Please see Figure 94, a graphical representation of the trend of the GHS/$ exchange rates from January to December 2019.

Figure 97: Trend of GHS/$ Exchange Rate (January – December 2019)



The average commercial banks' exchange rate for the year was about 3 percentage points higher than the average BOG interbank selling rate of GHS5.1804/US$.

Table 29: GHS/$ exchange rates for the period 2019.

Pricing Windows	BoG FX Rates (GHS / USD)	%age Change	Commercial Bank Rates (GHS / USD)	%age Change
1st - 15th Jan, 2019	4.8183		4.9731	
16th - 31st Jan, 2019	4.8381	0.41%	4.9743	0.02%
1st - 15th Feb, 2019	4.9144	1.58%	4.9923	0.36%
16th - 28th Feb, 2019	4.9643	1.02%	5.1021	2.20%
1st - 15th Mar, 2019	5.0205	1.13%	5.3130	4.13%
16th - 31st Mar, 2019	5.2047	3.67%	5.4967	3.46%
1st - 15th Apr, 2019	5.1917	-0.25%	5.4447	-0.95%
16th - 30th Apr, 2019	5.0873	-2.01%	5.2833	-2.96%
1st - 15th May, 2019	5.0895	0.04%	5.2180	-1.24%
16th - 31st May, 2019	5.0924	0.06%	5.2089	-0.17%
1st - 15th Jun, 2019	5.1045	0.24%	5.2803	1.37%
16th - 30th Jun, 2019	5.1886	1.65%	5.3736	1.77%
1st - 15th Jul, 2019	5.2492	1.17%	5.4348	1.14%
16th - 31st Jul, 2019	5.2578	0.16%	5.4534	0.34%
1st - 15th Aug, 2019	5.2574	-0.01%	5.4133	-0.74%
16th - 31st Aug, 2019	5.2606	0.06%	5.4300	0.31%
1st - 15th Sep, 2019	5.2731	0.24%	5.4627	0.60%
16th - 30 Sep, 2019	5.2948	0.41%	5.4918	0.53%
1st - 15th Oct, 2019	5.3145	0.37%	5.5100	0.33%
16th - 31st Oct, 2019	5.3205	0.11%	5.4667	-0.79%
1st - 15th Nov, 2019	5.3265	0.11%	5.4925	0.47%
16th - 30th Nov, 2019	5.3488	0.42%	5.5347	0.77%
1st - 15th Dec, 2019	5.3818	0.62%	5.5736	0.70%
16th - 31st Dec, 2019	5.5312	2.78%	5.6550	1.46%
Min	4.8183		4.9731	
Max	5.5312		5.6550	
Average	5.1804		5.3575	
Total Depreciation		16.24%		19.97%
Total Appreciation		-2.27%		-6.84%
Net Depreciatiom		13.97%		13.13%

7.11 Ex-Refinery Prices

The ex-refinery price for gasoline ranged between GHS2.5554/ltr and GHS3.2600/ltr, and averaged GHS2.9214/ltr. The lowest ex-refinery price was recorded in the first window of January while the highest was recorded in the first window of June.

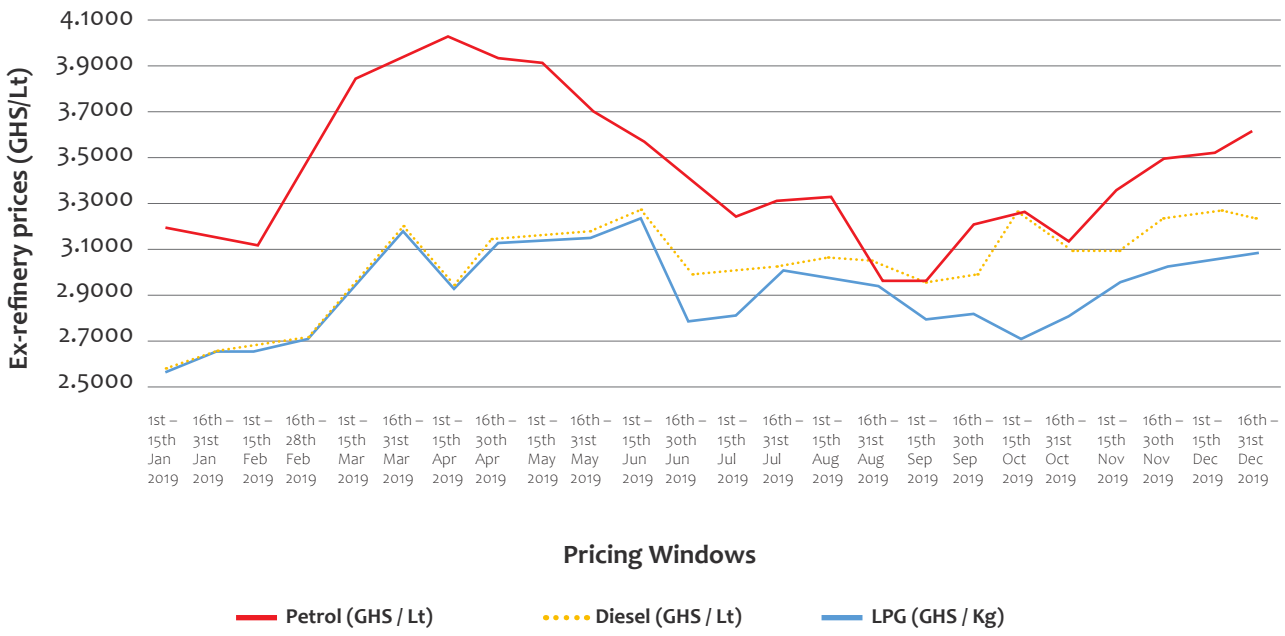
The ex-refinery price of gasoline represented 57% of the average pump price for 2019.

The ex-refinery price for gasoil ranged between GHS2.5554/ltr and GHS3.2861/ltr, and averaged GHS3.0379/ltr.

The lowest ex-refinery price was recorded in the first window of January while the highest was recorded in the first window of December. Average ex-ref price of diesel represented 59% of the ex-pump price.

The ex-refinery price for LPG ranged between GHS2.9547/ltr and GHS4.0575/ltr, and averaged GHS3.4612/ltr. The lowest ex-refinery price was recorded in the first window of September while the highest was recorded in the first window of April.

Figure 98: Trend of Ex-Refinery Prices (2019).



The ex-refinery price of gasoline represented 57% of the average pump price for 2019. The ex-refinery price for gasoil ranged between GHS2.5554/ltr and GHS3.2861/ltr, and averaged GHS3.0379/ltr.

The lowest ex-refinery price was recorded in the first window of January while the highest was recorded in the first window of December.

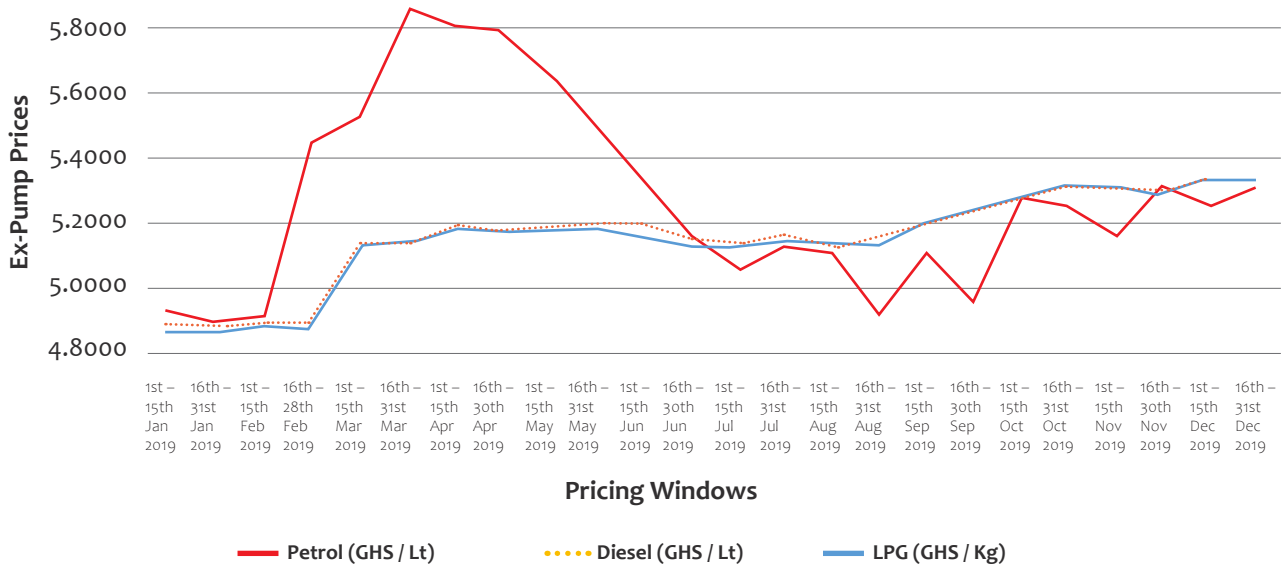
7.12 Ex-Pump Prices

The ex-pump price of gasoline for the year 2019 ranged between GHS4.8925/ltr and GHS5.3393/ltr and averaged GHS5.1650/ltr. The lowest price was recorded in the second window of January while the highest price was recorded in the first window of December.

The ex-pump price of gasoil for the period ranged between GHS4.9029/ltr and GHS5.3444/ltr and averaged GHS5.1720/ltr. The lowest price was recorded in the second window of January while the highest price was recorded in the second window of December. The ex-pump price of LPG for the period ranged between GHS4.9152/Kg and GHS5.8534/Kg and averaged GHS5.2841/Kg. The lowest price was recorded in the second window of January, while the highest price was recorded in the second window of March.

Please see Figure 96, a graphical representation of the trend of the ex-pump prices of gasoline, gasoil and LPG in the year 2019.

Figure 99: Trend of Ex-Pump Prices for the year 2019.



The ex-pump price of gasoline for the year 2019 ranged between GHS4.8925/ltr and GHS5.3393/ltr and averaged GHS5.1650/ltr. The lowest price was recorded in the second window of January while the highest price was recorded in the first window of December.

Table 30: Average Ex-Pump Prices.

Pricing Window	Petrol (USD / Lt)	%age Change	Diesel (USD / Lt)	%age Change	LPG (USD / Kg)	%age Change
1st - 15th Jan, 2019	4.8929		4.9038		4.9430	
16th - 31st Jan, 2019	4.8925	-0.015%	4.9029	-0.02%	4.9152	-0.56%
1st - 15th Feb, 2019	4.9054	0.26%	4.9156	0.26%	4.9431	0.57%
16th - 28th Feb, 2019	4.9027	-0.06%	4.9137	-0.04%	5.4500	10.25%
1st - 15th Mar, 2019	5.1402	4.84%	45.1500	4.81%	5.5318	1.50%
16th - 31st Mar, 2019	5.1604	0.39%%	5.1619	0.29%	5.8534	5.81%
1st - 15th Apr, 2019	5.1922	0.62%	5.2018	0.71%	5.8000	-0.91%
16th - 30th Apr, 2019	5.1875	-0.09%	5.1876	-0.27%	5.7800	-0.34%
1st - 15th May, 2019	5.1941	0.13%	5.2006	0.25%	5.6515	-2.22%
16th - 31st May, 2019	5.2041	0.19%	5.2134	0.25%	5.4890	-2.88%
1st - 15th Jun, 2019	5.1768	-0.53%	5.2052	-0.16%	5.3168	-3.14%
16th - 30th Jun, 2019	5.1448	-0.62%	5.1580	-0.91%	5.1705	-2.75%
1st - 15th Jul, 2019	5.1371	-0.15%	5.1476	-0.20%	5.0778	-1.79%
16th - 31st Jul, 2019	5.1550	0.35%	5.1730	0.49%	5.1359	1.15%
1st - 15th Aug, 2019	5.1459	-0.18%	5.1382	-0.67%	5.1283	-0.25%
16th - 31st Aug, 2019	5.1396	-0.12%	5.1559	0.35%	4.9443	-3.49%
1st - 15th Sep, 2019	5.2203	1.57%	5.2160	1.17%	5.1254	3.66%
16th - 30 Sep, 2019	5.2566	0.69%	5.2496	-0.64%	4.9678	-3.08%
1st - 15th Oct, 2019	5.2987	0.00%	5.2938	0.84%	5.2852	6.39%
16th - 31st Oct, 2019	5.3238	0.47%	5.3283	0.65%	5.2510	-0.65%%
1st - 15th Nov, 2019	5.3191	-0.09%	5.3163	-0.23%	5.1658	-1.62%
16th - 30th Nov, 2019	5.2945	-0.46%	5.3053	-0.21%	5.3132	2.85%
1st - 15th Dec, 2019	5.3393	0.85%	5.3419	0.69%	5.2717	0.78%
16th - 31st Dec, 2019	5.3364	-0.05%	5.3444	0.05%	5.3130	0.78
Min	4.8925		4.9029		4.9152	
Max	5.3393		5.3444		5.8594	
Average	5.1650		5.1720		5.2841	

7.13 Marketers and Dealers Margins

The estimated Marketers and Dealers Margins used by OMCs for gasoline ranged between GHp38.2652/ltr and GHp76.00/ltr, and averaged GHp54.8765/ltr. The lowest margin was recorded in the second window of December while the highest margin was recorded in the first window of October.

The estimated Marketers and Dealers Margins used by OMCs for gasoil ranged between GHp19.3083/ltr and GHp67.3392/ltr, and averaged GHp44.1884/ltr. The lowest margin was recorded in the second window of November, while the highest margin was recorded in the first window of January.

The estimated Marketers and Dealers Margins used by OMCs for LPG ranged between GHp35.00/Kg and GHp75.00/Kg, and averaged GHp56.9313/Kg.

The lowest margin was recorded in the first window of December, while the highest margin was recorded in the second window of May and the first window of June.

Figure 100: Trend of Ex-Pump Prices for the year 2019.

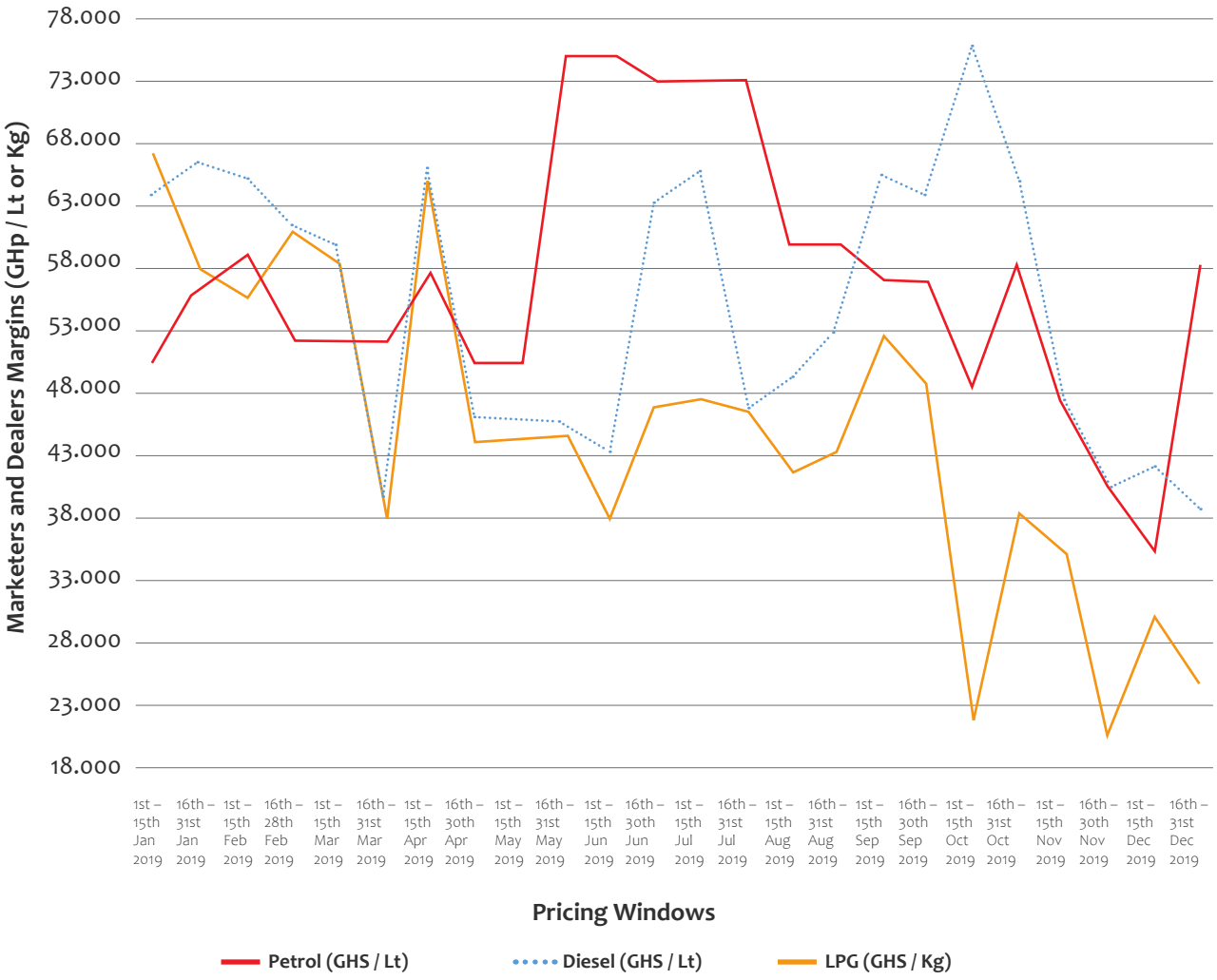


Table 31: Marketers' and Dealers' Margins.

Pricing Window	Petrol (USD / Lt)	%age Change	Diesel (USD / Lt)	%age Change	LPG (USD / Kg)	%age Change
1st - 15th Jan, 2019	64.2514		67.3392		50.0000	
16th - 31st Jan, 2019	66.8346	4.02%	57.8763	-14.05%	56.0000	12.00%
1st - 15th Feb, 2019	65.4175	-2.12%	55.4380	-4.21%	59.1175	5.57%
16th - 28th Feb, 2019	61.6039	-5.83%	60.7011	9.49%	51.6665	-12.60%
1st - 15th Mar, 2019	59.7438	-3.02%	58.7285	-3.25%	51.6665	0.00%
16th - 31st Mar, 2019	38.3951	-35.73%	36.8451	-37.26%	51.6665	0.00%
1st - 15th Apr, 2019	66.5358	73.29%	65.4929	77.75%	57.4732	11.24%
16th - 30th Apr, 2019	45.5692	-31.51%	43.5692	-33.47%	50.0000	-13.00%
1st - 15th May, 2019	45.3149	-0.56%	43.9655	0.91%	50.0000	0.00%
16th - 31st May, 2019	44.9870	-0.72%	43.9191	0.11%	75.0000	50.00%
1st - 15th Jun, 2019	42.6267	-5.25%	36.5082	-16.87%	75.0000	0.00%
16th - 30th Jun, 2019	63.2261	48.33%	46.4053	27.11%	73.0000	-2.67%
1st - 15th Jul, 2019	65.5963	3.75%	47.3250	1.98%	73.0000	0.00%
16th - 31st Jul, 2019	46.3488	-29.34%	45.8632	-3.09%	73.0000	0.00%
1st - 15th Aug, 2019	49.0785	5.89%	41.0789	-10.43%	60.0000	-17.81%
16th - 31st Aug, 2019	52.8461	7.68.%	43.1443	5.03%	60.0000	0.00%
1st - 15th Sep, 2019	65.9148	24.73%	52.7302	22.22%	57.0000	-5.00%
16th - 30 Sep, 2019	64.4071	-2.29%	48.1761	-8.64%	57.0000	0.00%
1st - 15th Oct, 2019	76.000	18.00%	21.000	-56.41%	48.2247	-15.40%
16th - 31st Oct, 2019	65.2985	-14.08%	37.6882	79.47%	58.0000	20.27%
1st - 15th Nov, 2019	47.2576	-27.63%	34.8323	-7.58%	46.5371	-19.76%
16th - 30th Nov, 2019	40.0592	-15.23%	19.3083	-44.57%	40.0000	-14.05%
1st - 15th Dec, 2019	41.4574	3.49%	29.1740	51.10%	35.0000	-12.50%
16th - 31st Dec, 2019	38.2652	-7.70%	23.4118	-19.75%	58.0000	65.71%
Min	38.2652		19.3083		35.0000	
Max	76.0000		67.3392		75.0000	
Average	54.8765		44.1884		56.9313	

7.14 Taxes and Regulatory Margins (TRM)

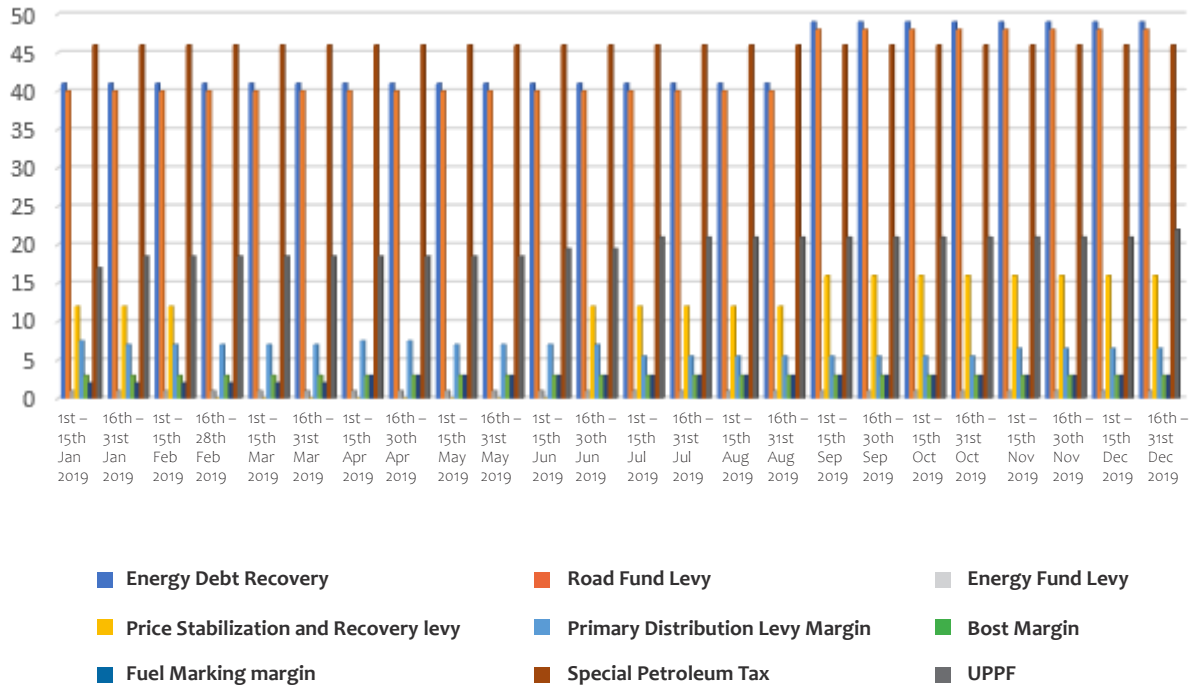
Taxes and regulatory margins averaged Ghp174.67/ltr and Ghp173.33/ltr for gasoline and gasoil respectively in 2019. This was Ghp20/ltr (13%) higher than the taxes and regulatory margins for 2018.

The 13% year-on-year increase in the taxes and regulatory margins mainly resulted from an increase in the Energy Debt Recovery Levy and the Road Fund Levy by Ghp8/ltr each. The upward revision came into force on 1st September 2019.

It is important to note that the Primary Distribution Margin was reviewed three times in the year: an increase of GHp1/Lt on 16th January, a GHp1.5/Lt reduction on 1st July and further increased by GHp1/Lt on 1st November.

The Price Stabilisation and Recovery Levy of Ghp12/ltr and Ghp10/ltr on gasoline and gasoil, respectively, were completely removed for eight (8) windows from 16th February to 1st June 2019. These were increased to Ghp16/ltr and Ghp14/ltr, respectively, on 1st September 2019.

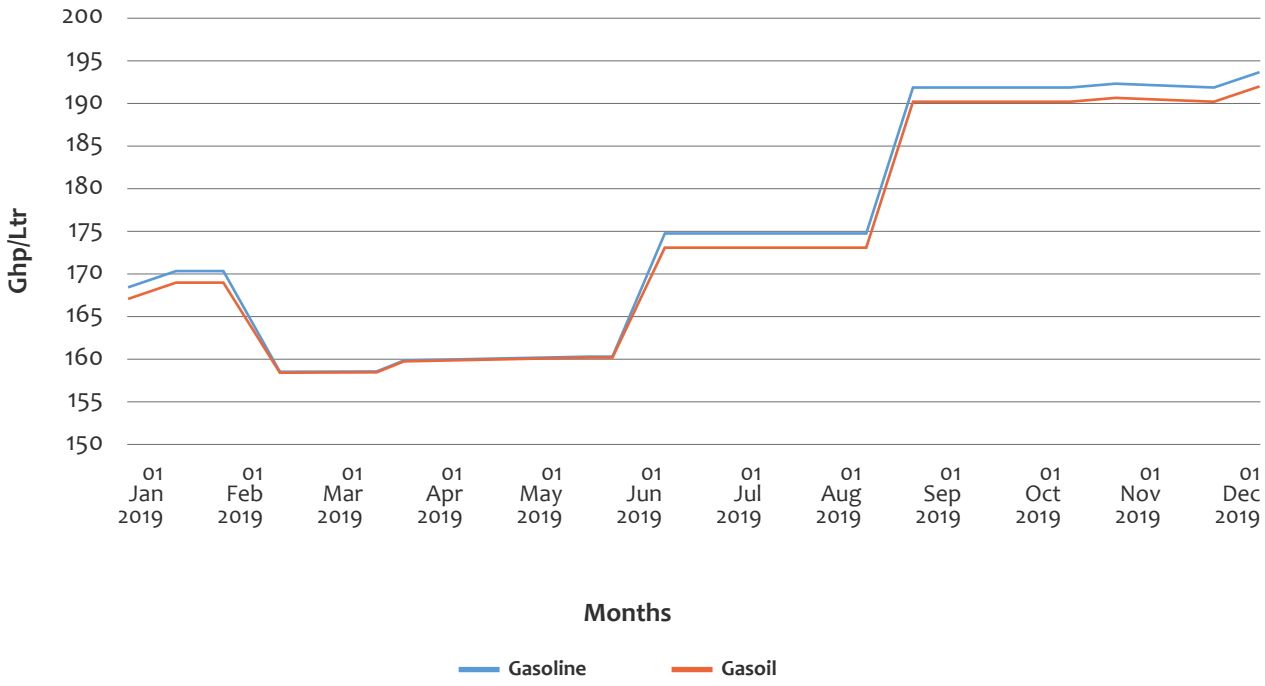
Figure 101: Taxes and Regulatory Margins (2019)



The Price Stabilisation and Recovery Levy of Ghp12/ltr and Ghp10/ltr on gasoline and gasoil, respectively, were completely removed for eight (8) windows from 16th February to 1st June 2019. These were increased to Ghp16/ltr and Ghp14/ltr, respectively, on 1st September 2019.

Taxes for gasoline and gasoil for the year were Ghp142.67/ltr and Ghp141.33/ltr, respectively, 12% higher than 2018's taxes of Ghp127.29/ltr and Ghp126.30/ltr. Taxes accounted for 27% of the 2019 average pump price. Regulatory margins for gasoil and gasoline averaged Ghp32/ltr for both gasoline and gasoil, representing 6% of the pump price.

Figure 102: Gasoline and Gasoil Taxes (2019)



8.0

Infrastructure

STORAGE

- The country's storage capacity (excluding fuel for power generation) for petroleum products stood at 1.914m^3.
- Out of this, 1.46mn m^3 (76%) was dedicated to refined products, while 455,976m^3 was dedicated for crude oil storage
- Government-controlled entities remained the largest storage providers of both crude oil and refined products storage.
- Tema Tank Farm Ltd. maintained its position as the largest private sector storage provider with a capacity of 192,000m^3

UTILISATION OF DEPOTS

- The national average tank-turn for all products (including crude oil) stood at 0.21 times per month for 2019, unchanged from 2018.
- The tank-turn for products storage facilities was 0.27 times per month, while tank-turn for crude storage stood at 0.03 times per month
- Ghana's storage facilities are grossly underutilized

ACQUISITIONS

- Cirrus Oil Terminal's facilities at Tema and Takoradi were acquired by Vana Energy Ltd. and Zen Terminals Ltd. Respectively
- Vana Energy Ltd.'s 29,000m^3 facility located in the Tema enclave is made up of a 10,000m3 storage facility dedicated to the storage of gasoil, 16,000m^3 gasoline storage capacity and 3,000m^3 storage capacity for ATK.
- Zen Terminals Ltd. is a 34,677m^3 storage capacity dedicated to the storage of gasoil.

8.1 Storage

Ghana's storage capacity (excluding fuel for power generation) for petroleum products stood at 1.914m3. Out of this, 1.46mn m3 (76%) was dedicated to refined products, while 455,976m3 was dedicated for crude oil storage.

Storage capacity dedicated to gasoil use remained the highest in the country. The 2019 storage capacity for gasoil regular stood at 681,276m3.

Gasoil storage capacity represented 36% of total storage (refined and crude oil storage) and 47% of total refined products storage.

Government-controlled entities remained the largest storage providers of both crude oil and refined products storage, accounting for 63% (1.2mn m3) of national storage. Their continuous dominance is driven by the crude oil capacity held by Tema Oil Refinery, which provides 383,976m3 of crude oil capacity, accounting for 20% of the total storage and 84% of crude oil storage.

Tema Tank Farm Ltd. maintained its position as the largest private sector storage provider with a capacity of 192,000m3, representing 25.4% of the total private storage capacity, followed by Blue Ocean which provided 22.9% of the private storage capacity.

Table 32: National Product Storage Capacity (2019).

Depots/ Products	Crude	AGO	MOGAS	LPG	KERO	ATK
STATE OWNED						
VRA	-	-	-	-		-
BOST	-	240,659	162,904	-	10,000	-
TOR	383,976	117,085	201,760	8,913	15,565	44,608
GHANA GAS	-	-	-	6,400	-	-
PRIVATELY OWNED						
SAHARA	-	28,166	15,201	-	-	-
ASOGLI	-	-	-	-	-	-
Vana Energy Ltd.	-	10,000	16,000	-	-	3,000
Zen Terminals Ltd	-	34,677	-	-	-	-
CHASE	72,000	70,000	50,000	-	-	-
FUELTRADE-TFC	-	47,337	53,691	4,000	-	-
PLATON	-	1,150	-	-	-	-
BLUE OCEAN	-	72,700	67,000	8,000	-	25,000
GHANSTOCK	-	24,000	-	-	-	-
JUHI	-	-	-	-	-	1,500
QUANTUM	-	35,502	33,557	15,100	-	-
VIVO	-	-	-	-	-	-
GOIL	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-
TOTAL STORAGE (M3)	455,976	681,276	600,713	42,413	25,565	74,108

Table 32: National Product Storage Capacity (2019) *(Continued)*

Depots/ Products	PREMIX	RFO	Unified	MGO	Bitumen	Total
STATE OWNED						
VRA	-	-	-	-	-	-
BOST	-	-	-	-	-	413,563
TOR	7,016	1,127	-	-	-	780,050
GHANA GAS	-	-	-	-	-	6,400
				-	-	-
PRIVATELY OWNED						
SAHARA	-	-	-	-	-	43,367
ASOGLI	-	-	-	-	-	-
Vana Energy Ltd.	-	-	-	-	-	29,000
Zen Terminals Ltd	-	-	-	-	-	34,677
CHASE	-	-	-	-	-	192,000
FUELTRADE-TFC	-	-	-	-	-	105,028
PLATON	-	300	1,150	-	-	2,600
BLUE OCEAN	-	-	-	-	-	173,300
GHANSTOCK	-	-	-	-	-	24,000
JUHI	-	-	-	-	-	1,500
QUANTUM		-	-	-	-	84,159
VIVO	-	-	-	-	3,651	3,651
TOTAL	-	-	-	-	4,191	4,191
GOIL	-	-	-	17,350	-	17,350
TOTAL STORAGE (M3)	7,016	1,427	1.150	17,350	7,842	1,914,837

Figure 103: Storage Capacities by Products (2019).

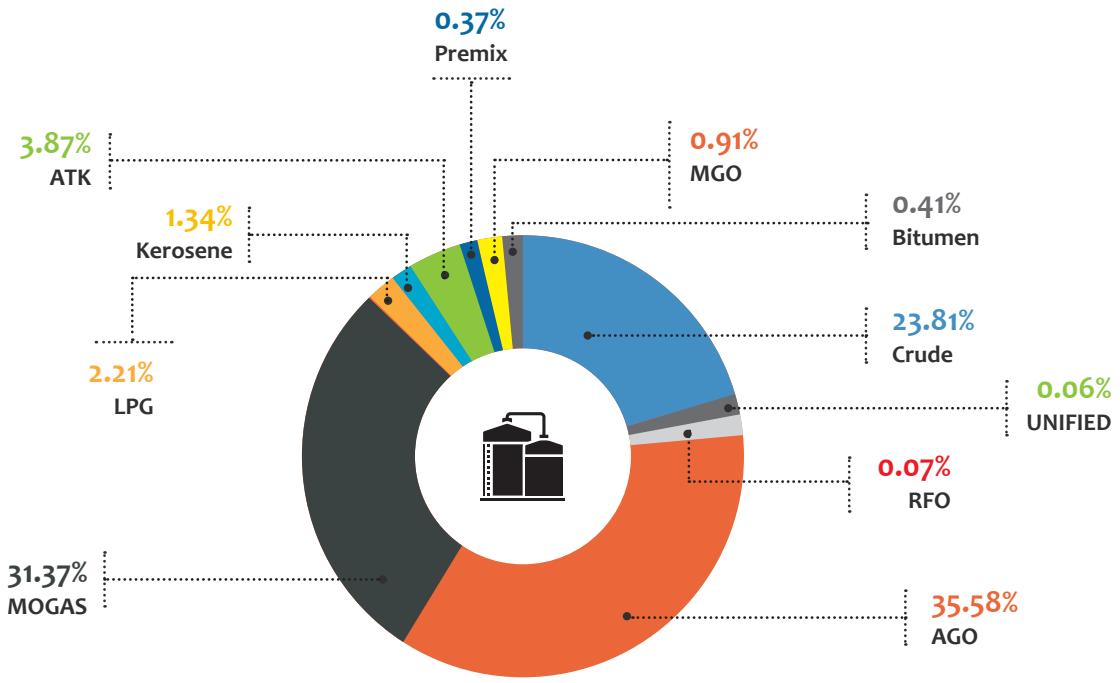
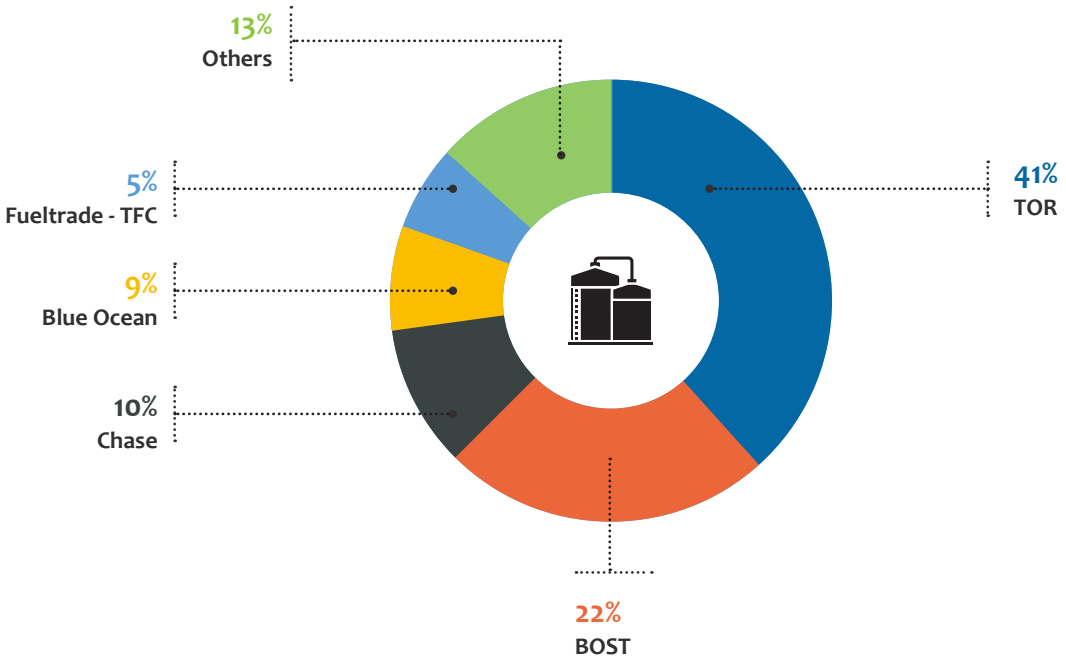


Figure 104: Top 5 National Storage providers vrs Others.



8.2 Acquisitions

Cirrus Oil Terminal's facilities at Tema and Takoradi were acquired by Vana Energy Ltd and Zen Terminals Ltd respectively. Licenses for the operation of the terminals were issued out on the 30th of July 2019 and 12th of February 2019, respectively. Vana Energy Ltd's 29,000m3 facility located in the Tema enclave is made up of a 10,000m3 storage facility dedicated to the storage of gasoil, 16,000m3 gasoline storage capacity and 3,000m3 storage capacity for ATK. Refurbishment works have been undertaken and the depot is now fully operational. Zen Terminals Ltd has a 34,677m3 storage capacity dedicated to the storage of gasoil.

8.3 Discharge Facilities

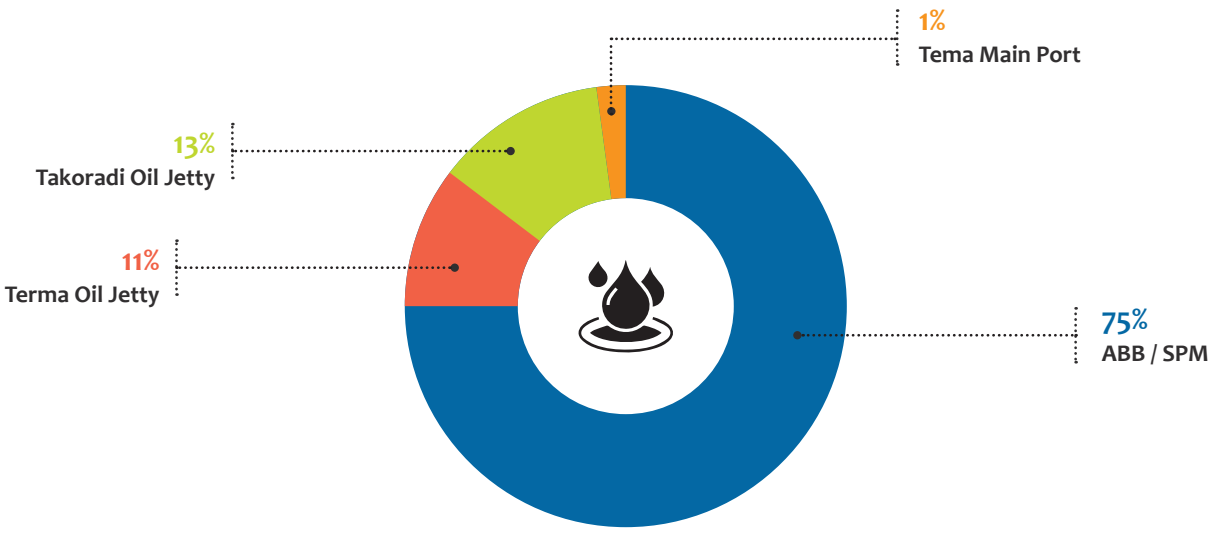
Total products brought into the country through all discharge facilities amounted to 4.38mn mt in 2019.

The All Buoy Berth (ABB) remained the country's primary discharge facility receiving volumes of up to 3.27mn mt in 2019 representing 75% of total product imports. This is a major increase from the 2.7mn mt discharged through the facility in 2018. A total of 1.34mn mt of gasoil out of the total 1.68mn mt of gasoil imported was discharged through the ABB, while 1.19mn mt of gasoline was also discharged through the facility. A total of 732,503mt of light crude oil was discharged through the Single Point Mooring facility (SPM).

The Takoradi Jetty saw the second highest activity; a total of 558,169 mt were imported into the country through the facility. This included gasoil, marine gasoil, LPG and bitumen.

The Tema Oil Jetty saw the third highest activity in 2019. The discharge facility received a total of 496,401mt, made up of LPG, ATK, HFO and LCO. Other facilities, such as the Tema Main Port, received a total of 55,866mt of light crude oil in 2019. Out of this, 13,865mt was sent to Platon and 42,001mt to Akwaaba link for refining.

Figure 105: Products received through the Discharge Facilities in 2019.



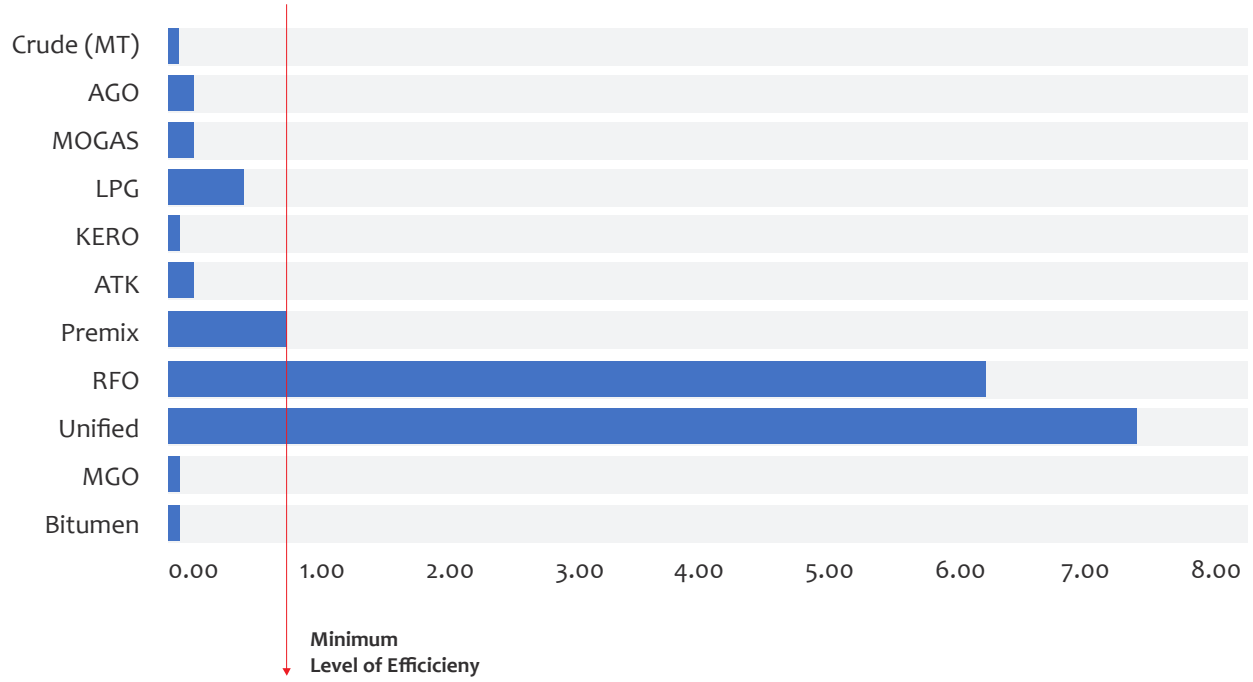
Cirrus Oil Terminal's facilities at Tema and Takoradi were acquired by Vana Energy Ltd and Zen Terminals Ltd respectively. Licenses for the operation of the terminals were issued out on the 30th of July 2019 and 12th of February 2019, respectively.

8.4 Utilisation of Depots

The national average tank-turn for all products (including crude oil) stood at 0.21 times per month for 2019, unchanged from 2018. The tank-turn for products storage facilities was 0.27 times per month (up from 0.25 times in 2018), while tank-turn for crude storage stood at 0.03 times per month (down from 0.07 times in 2018).

Compared to the global minimum tank-turn of 1 per month, Ghana's storage facilities are grossly underutilized. The poor crude tank-turn has been a result of the low operating level of Ghana's largest refinery, the Tema Oil Refinery, as well as the move from Light Crude Oil (LCO) as primary fuel for power to lean gas.

Figure 106: Tank - Turn rate (2019)



Storage facility for Unified (Naphtha) had the highest turn around activity at 7.68 times per month. Residual Fuel Oil tanks were also highly used within the year, with a tank-turn of about 6.34 times per month.

Storage facilities for gasoline and gasoil were underutilized, with tank-turns of 0.25 and 0.22 times per month, respectively. The tank-turn for crude was the lowest for the year, at 0.03 times per month. Residual Fuel Oil and Unified (naphtha) were the only products with tank-turns above the benchmark minimum of 1 per month.

8.5 Projects

The construction of a storage facility with a total storage capacity of 124,772m3 by Woodfields. The NPA granted Woodfields permission to commission a test run of Phase 1A of its depot, comprising of the gasoil tanks. The test run is expected to be completed by February 2021.

The national average tank-turn for all products (including crude oil) stood at 0.21 times per month for 2019, unchanged from 2018.

Compared to the global minimum tank-turn of 1 per month, Ghana's storage facilities are grossly underutilized. The poor crude tank-turn has been a result of the low operating level of Ghana's largest refinery, the Tema Oil Refinery, as well as the move from Light Crude Oil (LCO) as primary fuel for power to lean gas.

The storage capacity will comprise of a 61,372m3 storage capacity for gasoline and a 63,400m3 storage capacity for gasoil.

Quantum's LPG project has faced some delays due to technical challenges. It is expected to have about 35,502m3 of storage capacity, broken down into a 31,600m3 dedicated to power generation and 1,200m3 to domestic consumption.

Vihama's 100,000m3 tank farm in the Kpone Industrial Area, when completed, is expected to have 50,000m3 storage capacity each dedicated to the storage of gasoline and gasoil. The project which commenced in February 2017 is expected to be completed in quarter one (1) 2021.

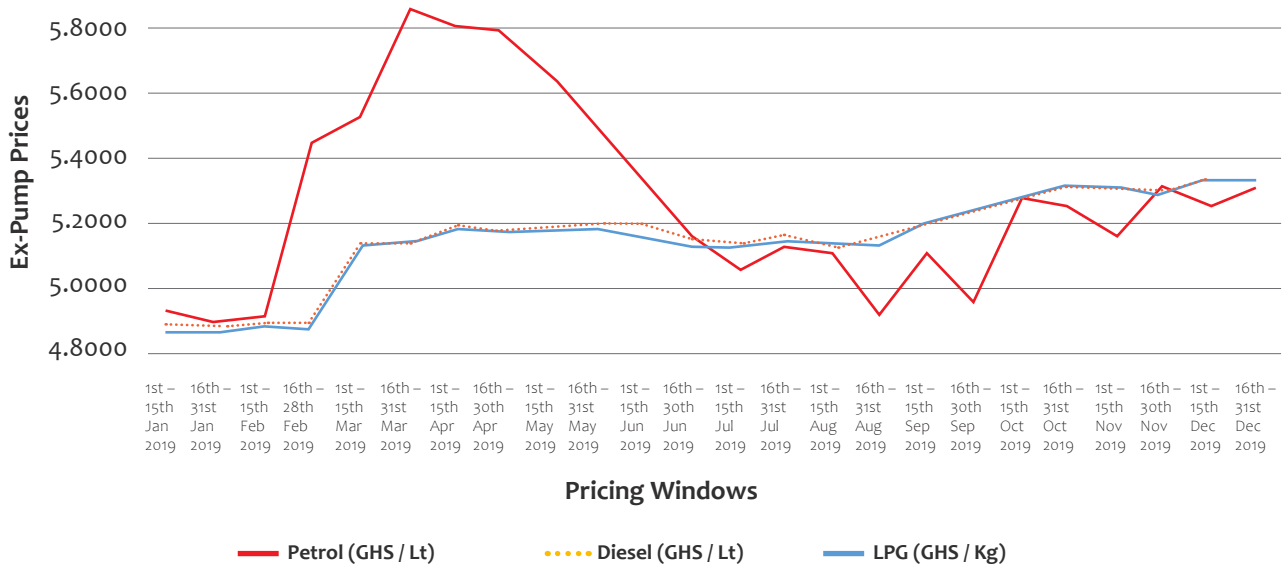
The commissioning of the projects will increase total national storage capacity (excluding power) by 12% to 2.14 mn m3 from the existing 1.91mn m3.

8.6 Utilisation of Retail Outlets

The average annual sales for retail outlets, which is used to determine their level of productivity, rose marginally from 1.14 million litres in 2018 to 1.17 million litres in 2019, representing a 2.58% growth year-on-year.

This indicated the second consecutive annual growth in the level of productivity despite the growth in the number of retail outlets and OMCs. It grew by 9.54% the previous year. This also deviates from the consistent fall in the annual level of productivity of retail outlets observed from 2011 to 2018.

Figure 107: Utlisation of Outlets



Appendices

Appendix 1

PUBLIC NOTICE – NPA. N. 009
BULK IMPORT, DISTRIBUTING AND EXPORT COMPANY LICENCE

A. The NATIONAL PETROLEUM AUTHORITY

wishes to inform the general public, and in particular those who intend to obtain a Bulk Import, Distributing and Export Company Licence of the following requirements for obtaining the licence.

Section 11(1) of the NPA Act, 2005 (Act 691) states that:

"A person shall not engage in a business or commercial activity in the petroleum downstream industry unless that person has been granted a licence for that purpose by the Authority."

Additionally, Section 12 of the NPA Act, 2005 (Act 691) states that:

"A license under this Act may only be granted to
a. a citizen of Ghana; or
b. a body corporate registered under the Companies Code, 1963 (Act 179); or
c. a partnership registered under the Incorporated Private Partnerships Act, 1962 (Act 152); or
d. a foreign individual or foreign company in a registered joint venture relationship with a citizen of Ghana or a Ghanaian company. "

B. REQUIREMENTS TO OBTAIN A BULK IMPORT, DISTRIBUTING & EXPORT COMPANY LICENCE

a. Business entity registration documents:

- Certificate of Incorporation;
- Certificate to Commence Business;
- Company Regulations;
- Forms 3& 4 from the Registrar General's Department;
- Tax Clearance Certificate; and
- Annual Returns as filed at the Registrar General's Department (where applicable).

b. A comprehensive Business Plan for a minimum of five (5) years detailing the following: where applicable

i. business description including the company's trading activities, history and capabilities where applicable;

ii. organization, corporate structure and management;

iii. risk analysis;

Bulk Distributing Company Licence (Category 1) Licence:
(a) Authorizes a company to import crude oil as well as procure, store, distribute and sell petroleum products wholesale to Oil/LPG Marketing Companies; and
(b) Export petroleum products to neighbouring countries under customs seal.

iv. market analysisv. regulatory regime;

vi. project strategy;

vii. financial and economic analysis;

viii. environmental and social analysis; and

ix. corporate social responsibility plan.

c. A corporate environmental policy culminating in the grant and issue of an environmental permit by the EPA.

d. Minimum working capital requirement of GH¢ 30 million. An applicant's claim of GH¢ 30 million must be specified as its working capital and proven by any or a combination of the following:

- Cash or cash equivalents (e.g. government bonds, treasury bills etc.) lodged at the Bank of Ghana serving as equity capital.
- Equity stake in an industry relevant fixed asset (e.g. storage depot, port infrastructure etc.) must be proved by an independent accounting firm to be appointed by the NPA.

d. A minimum trade facility equivalent of US$ 60 million. Please note that new applicants will be required to submit evidence in writing from a reputable bank or banks licensed by the Bank of Ghana and in good standing in support of their application stating their willingness to provide funding not less than US$ 60 million or its Ghana Cedi equivalent to the applicant.

e. Infrastructure Requirement: (Minimum of 40,000 m3 of storage facilities).

i. This should be the company's owned-storage facility or a lease of a dedicated storage facility from an entity other than Tema Oil Refinery (TOR). Such leased storage facility must not be shared with third parties.

ii. In the case of a lease, the Company (Lessee) would be required to procure storage capacity of 40,000m3 on a long-term basis (minimum 5 years, renewable for another 5 years) before a Bulk Import, Distributing and Export Company Licence would be granted and issued. The licence will be renewed on condition that the lessee has a valid lease agreement, among others, in line with the lease period stated above at all times.

iii. In the case of a company intending to have its own storage facility, the company must apply for and obtain a permit to construct a depot for the storage of petroleum products, where applicable.

f. Evidence of local partnership i.e. at least 51% shares to be held by Ghanaian citizens.

Bulk Distributing Company Licence (Category 1) Licence:
(a) Authorizes a company to import crude oil as well as procure, store, distribute and sell petroleum products wholesale to Oil/LPG Marketing Companies; and
(b) Export petroleum products to neighbouring countries under customs seal.

C. REQUIREMENTS FROM OTHER STAKEHOLDERS AFTER OBTAINING A BULK IMPORT, DISTRIBUTING AND EXPORT COMPANY LICENCE.

Installation of the front-end of the GCNet in the offices of the respective applicant and subsequent declaration of all petroleum imports and exports to customs through the Ghana Customs Management System/Ghana Customs Network (GCMS/GCNet) prior to the delivery of the cargoes.

D. APPLICATION FOR A CONSTRUCTION PERMIT FOR A PETROLEUM PRODUCT STORAGE, BULK SALE AND DISTRIBUTION DEPOT

1. Any application for a permit to construct a petroleum product storage, bulk sale and distribution depot (Depot) shall be submitted to the National Petroleum Authority giving details of the proposals and any information that may be relevant to the project.

2. If, after the permit to construct the Depot has been granted and the execution of the works has not commenced at the expiry of twenty four (24) months from the date on which permit was granted, or at the expiration of any extension of that period which the Authority may allow, the permit shall cease to have effect.

3. The following documents shall be submitted with the application.

i. Evidence that the applicant is a Licensed Bulk Distribution Company (BDC) or a corporate entity legally affiliated to a BDC in good standing with the Authority or a Company with established competence in the petroleum downstream industry.

ii. Evidence of local participation i.e. at least 51% shares to be held by Ghanaian citizens.

iii. Evidence of Land Title Registration/Lease Agreement with the land Owner.

iv. An Environmental Permit from the Environmental Protection Agency (EPA).

v. A Development and Building Permit from the Land Use and Spatial Planning Authority approving the construction of the Depot for petroleum storage, bulk sale and distribution on the proposed site.

vi. A Fire Permit signed by the Chief Fire Officer or a Regional Fire Officer evidencing that arrangements proposed for the prevention and fighting of fire coupled with good housekeeping at the site are satisfactory.

vii. A report from the Geological Survey Department of Ghana attesting to either the absence of or acceptable levels of seismic activity on and around the proposed site.

viii. A Geotechnical Report.

Bulk Distributing Company Licence (Category 1) Licence:
(a) Authorizes a company to import crude oil as well as procure, store, distribute and sell petroleum products wholesale to Oil/LPG Marketing Companies; and
(b) Export petroleum products to neighbouring countries under customs seal.

Appendix 2

PUBLIC NOTICE – NPA. N. 009A

BULK DISTRIBUTING AND EXPORT COMPANY LICENCE

A. The NATIONAL PETROLEUM AUTHORITY wishes to inform the general public, and in particular those who intend to obtain a Bulk Distributing and Export Company Licence of the following requirements for obtaining the licence.

Section 11(1) of the NPA Act, 2005 (Act 691) states that:

"A person shall not engage in a business or commercial activity in the petroleum downstream industry unless that person has been granted a licence for that purpose by the Authority."

B. REQUIREMENTS TO OBTAIN A BULK DISTRIBUTING AND EXPORT COMPANY LICENCE

a. The Applicant shall be a corporate entity registered under the laws of Ghana with 100% equity interest held by a citizen or citizens of Ghana.

b. Business entity registration documents:

- Certificate of Incorporation;
- Certificate to Commence Business;
- Company Regulations;
- Forms 3& 4 from the Registrar General's Department;
- Tax Clearance Certificate; and
- Annual Returns as filed at the Registrar General's Department (where applicable).

c. A comprehensive Business Plan for a minimum of five (5) years detailing the following: where applicable:

i. business description including the company's trading activities, history and capabilities where applicable;
ii. organization, corporate structure and management;
iii. risk analysis;
iv. market analysis;
v. regulatory regime;
vi. project strategy;
vii. financial and economic analysis;
viii. environmental and social analysis; and
ix. corporate social responsibility plan.

Bulk Distributing Company Licence (Category 1) Licence:
(a) Authorizes a company to import crude oil as well as procure, store, distribute and sell petroleum products wholesale to Oil/LPG Marketing Companies; and
(b) Export petroleum products to neighbouring countries under customs seal.

d. A corporate environmental policy culminating in the grant and issue of an environmental permit by the Environmental Protection Agency (EPA).

e. Minimum equity capital requirement of GH¢15 million. An applicant's claim of GH¢15 million must be specified as its working capital and proven by any or a combination of the following:
- Cash or cash equivalents (e.g. government bonds, treasury bills etc.) serving as equity capital.
- Equity stake in an industry relevant fixed asset (e.g. service stations etc.) must be proved by an independent accounting firm to be appointed by the NPA.

d. A minimum trade facility equivalent of US$ 15 million. New applicants will be required to submit evidence in writing from a reputable financial institution licensed by the Bank of Ghana and in good standing in support of their application stating their willingness to provide funding not less than US$ 15 million or its Ghana Cedi equivalent to the applicant.

C. REQUIREMENTS FROM OTHER STAKEHOLDERS AFTER OBTAINING A BULK DISTRIBUTING AND EXPORT COMPANY LICENCE

Installation of the front-end of the GCNet in the offices of the respective applicant and subsequent declaration of all petroleum imports and exports to customs through the Ghana Customs Management System/Ghana Customs Network (GCMS/GCNet) prior to the delivery of the cargoes.

Bulk Distributing Company Licence (Category 2) Licence:
(a) Authorizes a company to procure petroleum products in-tank from the refineries or Category 1 BDCs for sale to licensed OMCs and LPGMCs; and
(b)Export petroleum products to neighbouring countries under customs seal.

Appendix 3

PUBLIC NOTICE – NPA. N. 009B
BULK LPG DISTRIBUTING COMPANY LICENCE
A. The NATIONAL PETROLEUM AUTHORITY wishes to inform the general public, specifically those who intend to be, or are already service providers in the petroleum downstream sector, on provisions under the National Petroleum Authority Act 2005, (Act 691) and the requirements for obtaining a licence.

Section 11(1)
A person shall not engage in a business or commercial activity in the petroleum downstream industry unless that person has been granted a licence for that purpose by the Authority.

Section 12
A licence under this Act may only be granted to

a. a citizen of Ghana; or
b. a body corporate registered under the Companies Code, 1963 (Act 179); or
c. a partnership registered under the Incorporated Private Partnerships Act, 1962 (Act 152); or
d. a foreign individual or foreign company in a registered joint venture relationship with a citizen of Ghana or a Ghanaian company.

B. REQUIREMENTS TO OBTAIN A BULK LPG DISTRIBUTING COMPANY LICENCE

a. A detailed Business Plan.

b. A corporate environmental policy culminating in the grant and issue of an environmental permit by the EPA.

c. Infrastructure Requirement (minimum of 6,000 m3 of storage facilities) (Company must apply for and obtain a permit to construct a depot for the storage of petroleum products).

d. The location of the depot must be within a 7 km radius from the Oil Jetty (if facility is beyond 7 km from the Jetty, then provision must be made for a booster to facilitate the discharge of all products from the vessel within 24 hours.

e. Modern automated loading gantries/racks with options for both bottom and top loading.

f. Installation of the front-end of the GCNet in the offices of the respective applicant and subsequent declaration of all petroleum imports and exports to customs through the Ghana Customs Management System/Ghana Customs Network (GCMS/GCNet) prior to the delivery of their cargoes.

g. Applicant Company must provide the following:

1. Proof of title to land.
2. Permits from all relevant regulatory agencies.
3. Evidence of local partnership i.e. at least 50% shares to be held by Ghanaian citizens.

Appendix 4: Petroleum Subsidies (2008 to 2019)

Year	FLUR USD	FLURI USD	PUR USD	RVF USD	TOTAL USD
2008	-	-	186,271,017	-	186,271,017
2009-2010	-	-	41,659,328	-	41,659,328
2011	(1,419,522)	(15,282)	432,987,992	459,695	432,012,883
2012	112,672,118	3,406,835	968,101,245	3,916,166	1,088,096,364
2013	33,662,908	3,923,198	225,989,703	12,789,609	276,365,418
2014	446,606,609	16,142,755	105,957,319	13,749,705	582,456,388
2015	214,723,851	24,251,054	21,242,199	11,496,660	271,713,764
2016	-	24,280,286	33,609,272	10,196,487	68,086,046
2017		11,987,311	63,859,366	12,592,410	88,439,087
2018	-	1,417,513	51,173,924	22,512,765	75,104,202
2019	-	-	43,191,974	-	43,191,974
	806,245,963	**85,393,671**	**2,174,043,338**	**87,713,497**	**3,153,396,470**

National Stock Reconciliation from 2015 to 2019

2019

	Opening Stock (1/1/19)	Purchases (Imports) for the year	Production	Available Stock	Less Allowable Losses within the year*	Less Closing Stock (31/12/19)	Expected Sales (ES) for 2019	Domestic Reported Sales	Export Reported Sales	Total Reported Sales (RP)	Difference (ES-RP)	Total
	(a)	(b)	(c)	(d=a+b+c)	(e)	(f)	(g=d-e-f)	(h)	(i)	(j=h+i)	(j-g)	(∑)
GASOIL	418,702,815	2,051,440,023	234,468,421	2,704,611,260	(5,714,771)	(258,973,959)	2,439,922,530	1,790,833,999	138,988,500	1,929,822,499	510,100,031	
GASOLINE	416,024,954	1,675,477,263	165,496,421	2,256,998,638	(5,891,116)	(79,737,818)	2,171,369,704	1,782,291,150	43,987,500	1,826,278,650	345,091,054	855,191,085
	834,727,769	3,726,917,286	399,964,842	4,961,609,897	(11,605,887)	(338,711,777)	4,611,292,234	3,573,125,149	182,976,000	3,756,101,149	855,191,085	

2018

	Opening Stock (1/1/18)	Purchases (Imports) for the year	Production	Available Stock	Less Allowable Losses within the year*	Less Closing Stock (31/12/18)	Expected Sales (ES) for 2018	Domestic Reported Sales	Export Reported Sales	Total Reported Sales (RP)	Difference (ES-RP)	Total
	(a)	(b)	(c)	(d=a+b+c)	(e)	(f)	(g=d-e-f)	(h)	(i)	(j=h+i)	(j-g)	(∑)
GASOIL	148,616,601	2,048,956,564	137,112,640	2,334,685,805	-	(418,702,815)	1,915,982,990	2,173,595,092	65,504,579	2,239,099,671	(323,116,681)	
GASOLINE	102,508,741	1,726,486,851	136,380,235	1,965,375,827	-	(416,024,954)	1,549,350,873	1,735,727,800	64,760,680	1,800,488,480	(251,137,607)	(574,254,289)
	251,125,342	3,775,443,414	273,492,875	4,300,061,631	-	(834,727,769)	3,465,333,862	3,909,322,892	130,265,259	4,039,588,151	(574,254,289)	

2017

	Opening Stock (1/1/17)	Purchases (Imports) for the year	Production	Available Stock	Less Allowable Losses within the year*	Less Closing Stock (31/12/17)	Expected Sales (ES) for 2017	Domestic Reported Sales	Export Reported Sales	Reported Sales (RP) for 2017	Difference (ES-RP)	Total
	(a)	(b)	(c)	(d=a+b+c)	(e)	(f)	(g=d-e-f)	(h)	(i)	(j=h+i)	(j-g)	(∑)
GASOIL	211,995,001	2,533,920,517	12,893,367	2,758,808,885	(6,367,035)	(148,616,601)	2,603,825,250	1,967,264,841	236,704,766	2,203,969,607	399,855,642	
GASOLINE	136,569,861	2,100,852,093	8,665,884	2,246,087,838	(6,750,458)	(102,508,741)	2,136,828,639	1,522,797,100	232,255,122	1,755,052,222	381,776,417	781,632,059
	348,564,862	4,634,772,610	21,559,251	5,004,896,723	(13,117,492)	(251,125,342)	4,740,653,889	3,490,061,941	468,959,888	3,959,021,829	781,632,059	

2016

	Opening Stock (1/1/16)	Purchases (Imports) for the year	Production	Available Stock	Less Allowable Losses within the year*	Less Closing Stock (31/12/16)	Expected Sales (ES) for 2016	Domestic Reported Sales	Export Reported Sales	Reported Sales (RP) for 2016	Difference (ES-RP)	Total
	(a)	(b)	(c)	(d=a+b+c)	(e)	(f)	(g=d-e-f)	(h)	(i)	(j=h+i)	(j-g)	(∑)
GASOIL	224,710,508	2,080,574,229	314,444,673	2,619,729,410	(5,987,547)	(211,995,001)	2,401,746,862	2,091,572,978	311,393,128	2,402,966,106	(1,219,245)	
GASOLINE	112,258,640	1,631,445,112	327,460,366	2,071,164,118	(6,268,498)	(136,569,861)	1,928,325,759	1,510,273,052	260,599,420	1,770,872,472	157,453,287	156,234,043
	336,969,148	3,712,019,341	641,905,039	4,690,893,528	(12,256,045)	(348,564,862)	4,330,072,621	3,601,846,030	571,992,548	4,173,838,578	156,234,043	

2015

	Opening Stock (1/1/15)	Purchases (Imports) for the year	Production	Available Stock	Less Allowable Losses within the year*	Less Closing Stock (31/12/15)	Expected Sales (ES) for 2015	Domestic Reported Sales	Export Reported Sales	Reported Sales (RP) for 2015	Difference (ES-RP)	Total
	(a)	(b)	(c)	(d=a+b+c)	(e)	(f)	(g=d-e-f)	(h)	(i)	(j=h+i)	(j-g)	(∑)
GASOIL	222,176,636	2,155,824,192	53,658,759	2,431,659,586	(5,523,707)	(224,710,508)	2,201,425,371	2,256,529,716	10,202,000	2,266,731,716	(65,306,345)	
GASOLINE	221,415,725	1,691,130,682	42,699,269	1,955,245,677	(5,548,256)	(112,258,640)	1,837,438,780	1,623,189,850	105,653,127	1,728,842,977	108,595,803	43,289,458
	443,592,361	3,846,954,874	96,358,028	4,386,905,263	(11,071,963)	(336,969,149)	4,038,864,151	3,879,719,566	115,855,127	3,995,574,693	43,289,458	

* Allowable losses are computed on the following rate on total volume imports and production

Product	Rate
Gasoil	0.25%
Gasoline	0.32%

2019 PETROLEUM TAX REVENUE

Tax Revenues	GASOLINE	GASOIL	KEROSENE	MGO LOCAL	FUEL OIL	LPG DOMESTIC	LPG POWER	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	EXEMPTIONS
ENERGY DEBT RECOVERY LEW	780,467,448	781,528,881	-	911,384	7,039,991	115,086,104	-	-	3,595,544	-	146,295,528	38,401,735	-	(73,910,989)
ROAD FUND	762,644,536	763,630,856	-	-	-	-	-	-	3,510,160	-	142,939,744	37,503,052	-	(72,199,560)
ENERGY FUND	17,822,912	17,898,025	46,935	-	1,759,998	-	-	-	85,384	-	3,355,784	878,683	-	(1,711,379)
PRICE STABILISATION AND RECOVERY LEVY	238,738,976	202,835,178	-	-	-	34,150,856	-	-	901,240	-	37,912,032	9,764,700	-	(18,985,990)
EXPORT DUTY	-	-	-	-	-	-	-	-	-	32,658,137	-	-	-	
SPT	819,853,929	823,309,150	1,830,465	13,974,559	-	143,795,996	-	3,044,970	-	-	154,366,064	41,339,399	-	
								-	-					
Total	2,619,527,800	2,589,202,090	1,877,400	14,885,943	8,799,988	293,032,957	-	3,044,970	8,092,328	32,658,137	484,869,152	127,307,569	-	(166,807,918)
Product Share of Revenue	43.54%	43.03%	0.03%	0.25%	0.15%	4.87%	0.00%	0.05%	0.13%	0.54%	8.06%	2.13%	0.00%	-2.77%
	100													

JAN. TO AUG. 2019 PETROLEUM TAX RATES AND VOLUMES

0	GASOLINE	GASOIL (REG.)	KEROSENE	MGO LOCAL	FUEL OIL	LPG DOMESTIC	LPG POWER	UNIFIED	MGO Foreign	ATK*	GASOIL MINES	GASOIL RIGS	PREMIX	TOTAL
VOLUMES (LITRES EXCEPT LPG IN KG)	1,160,690,200	1,193,429,300	2,965,500	16,906,500	118,907,765	194,741,060	-	3,091,500	7,353,401	188,731,900	226,723,600	70,421,398	51,664,500	**3,235,625,624**
ENERGY DEBT RECOVERY LEW	41.00	41.00	-	3.00	4.00	37.00		-	41.00	-	41.00	41.00	-	
ROAD FUND	40.00	40.00	-	-	-	-		-	40.00	-	40.00	40.00	-	
ENERGY FUND	1.00	1.00	1.00	-	1.00	-		-	1.00	-	1.00	1.00	-	
PRICE STABILISATION AND RECOVERY LEVY	12.00	10.00	-	-	-	10.00		-	10.00	-	10.00	10.00	-	
EXPORT DUTY	-	-	-	-	-	-		-	-	11.36	-	-	-	
SPT	46.00	46.00	39.00	46.00	-	48.00	48.00	46.00	-	-	46.00	46.00	-	
	1,782,291,150	1,790,833,999	4,693,500	30,379,477	175,999,765	299,574,992		6,619,500	8,538,401	287,483,600	335,578,400	89,868,258	72,063,000	
	All taxes are in Ghp/litre													
*	*2 Cents per litre of ATK were converted at a rate of Ghs5.68 to US$*													
	100													

SEP. TO DEC. 2019 PETROLEUM TAX RATES AND VOLUMES

Tax Revenues	GASOLINE	GASOIL (REG.)	KEROSENE	MGO LOCAL	FUEL OIL	LPG DOMESTIC	LPG POWER	UNIFIED	MGO Foreign	ATK*	GASOIL MINES	GASOIL RIGS	PREMIX	TOTAL
VOLUMES (LITRES EXCEPT LPG IN KG)	621,600,950	596,373,200	1,728,000	13,472,977	57,092,000	104,833,932	-	3,528,000	1,185,000	98,751,700	108,854,800	19,446,860	20,398,500	**1,647,265,919**
ENERGY DEBT RECOVERY LEW	49.00	49.00	-	3.00	4.00	41.00		-	49.00	-	49.00	49.00	-	
ROAD FUND	48.00	48.00	-	-	-	-		-	48.00	-	48.00	48.00	-	
ENERGY FUND	1.00	1.00	1.00	-	1.00	-		-	1.00	-	1.00	1.00	-	
PRICE STABILISATION AND RECOVERY LEVY	16.00	14.00	-	-	-	14.00		-	14.00	-	14.00	14.00	-	
EXPORT DUTY	-	-	-	-	-	-		-	-	11.36	-	-	-	
SPT	46.00	46.00	39.00	46.00	-	48.00	48.00	46.00	-	-	46.00	46.00	-	
TOTAL VOLUMES (LITRES EXCEPT LP	1,782,291,150	1,789,802,500	4,693,500	30,379,477	175,999,765	299,574,992	-	6,619,500	8,538,401	287,483,600	335,578,400	89,868,258	72,063,000	4,882,892,543

2018 PETROLEUM TAX REVENUE

Tax Revenues	GASOLINE	GASOIL	KEROSENE	MGO LOCAL	FUEL OIL	LPG DOMESTIC	LPG POWER	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	EXEMPTIONS	TOTAL
ENERGY DEBT RECOVERY LEVY	681,598,883	693,969,444	-	854,196	5,614,474	106,681,650	-	-	4,006,668	-	137,771,726	42,781,253	-	(193,152,543)	**1,480,125,752**
ROAD FUND	664,974,520	677,043,360	-	-	-	-	-	-	3,908,944	-	134,411,440	41,737,808	-		**1,522,076,072**
ENERGY FUND	16,624,363	16,926,084	61,610	-	1,403,619	-	-	-	97,724	-	3,360,286	1,043,445	-		**39,517,130**
PRICE STABILISATION AND RECOVERY LEVY	199,492,356	169,260,840	-	-	-	28,832,879	-	-	977,236	-	33,602,860	10,434,452	-	(217,270,000)	**225,330,623**
EXPORT DUTY	-	-	-	-	-	-	-	-	-	23,263,166	-	-	-		**23,263,166**
SPT	764,720,698	778,599,864	2,402,790	13,097,678	-	138,397,817	52,071,337	830,070	-	-	154,573,156	47,998,479	-		**1,952,691,888**
Total	2,327,410,820	2,335,799,592	2,464,400	13,951,874	7,018,093	273,912,346	52,071,337	830,070	8,990,571	23,263,166	463,719,468	143,995,438	-	(410,422,543)	5,633,427,174
Product Share of Revenue	41.17%	41.32%	0.04%	0.25%	0.12%	4.85%	0.92%	0.01%	0.16%	0.41%	8.20%	2.55%	0.00%	-7.26%	100.00%

2018 PETROLEUM TAX RATES AND VOLUMES

Tax Revenues	GASOLINE	GASOIL (REG.)	KEROSENE	MGO LOCAL	FUEL OIL	LPG DOMESTIC	LPG POWER	UNIFIED	MGO Foreign**	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	TOTAL
VOLUMES (LITRES EXCEPT LPG IN KG)	1,662,436,300	1,692,608,400	6,161,000	28,473,212	140,361,853	288,328,785	108,481,952	1,804,500	9,772,360	248,538,100	336,028,600	104,344,520	73,291,500	**4,700,631,082**
ENERGY DEBT RECOVERY LEVY	41.00	41.00	-	3.00	4.00	37.00		-	41.00	-	41.00	41.00	-	
ROAD FUND	40.00	40.00	-	-	-	-		-	40.00	-	40.00	40.00	-	
ENERGY FUND	1.00	1.00	1.00	-	1.00	-		-	1.00	-	1.00	1.00	-	
PRICE STABILISATION AND RECOVERY LEVY	12.00	10.00	-	-	-	10.00		-	10.00	-	10.00	10.00	-	
EXPORT DUTY	-	-	-	-	-	-		-	-	9.36	-	-	-	
SPT	46.00	46.00	39.00	46.00	-	48.00	48.00	46.00	-	-	46.00	46.00	-	

All taxes are in Ghp/litre

* 2 Cents per litre of ATK were converted at a rate of Gh¢4.68 to US$

** Net volume position after adjusting gross volume of 12.14mn with 2.37mn litres sold in the first window of the year when the product was non-taxable.

2017 PETROLEUM TAX REVENUE

Tax Revenues	GASOLINE	GASOIL	KEROSENE	MGO LOCAL	FUEL OIL	LPG	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	EXEMPTIONS	TOTAL
ENERGY DEBT RECOVERY LEVY	586,742,021	583,503,595	-	1,141,813	5,199,659	102,380,032	-	43,559,538	-	127,144,936	36,765,734	-	(191,347,740.00)	**1,295,089,588**
ROAD FUND	572,431,240	569,271,800	-	-	-	-	-	42,497,110	-	124,043,840	35,869,009	-		**1,344,112,999**
ENERGY FUND	14,310,781	14,231,795	69,300	-	1,299,915	-	-	1,062,428	-	3,101,096	896,725	-		**34,972,040**
PRICE STABILISATION AND RECOVERY LEVY	171,729,372	142,317,950	-	-	-	27,670,279	-	10,624,278	-	31,010,960	8,967,252	-		**392,320,091**
EXPORT DUTY	-	-	-	-	-	-	-	-	18,193,085	-	-	-		**18,193,085**
SPT	693,357,339	683,489,259	2,128,203	17,846,542	-	127,272,214	648,454	-	-	160,047,565	46,279,989	-		**1,731,019,566**
Total	2,038,570,753	1,992,784,399	2,197,503	18,988,356	6,499,574	257,322,525	648,454	97,743,353	18,193,085	445,348,397	128,778,709	-	(191,347,740)	5,007,055,108
Product Share of Revenue	40.71%	39.80%	0.04%	0.38%	0.13%	5.14%	0.01%	1.95%	0.36%	8.89%	2.57%	0.00%	3.82%	100.00%

2017 PETROLEUM TAX RATES AND VOLUMES

Tax Revenues	GASOLINE	GASOIL (REG.)	KEROSENE	MGO LOCAL	FUEL OIL	LPG	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	TOTAL
VOLUMES (LITRES EXCEPT LPG IN KG)	1,431,078,100	1,423,179,500	6,930,000	38,060,444	129,991,486	276,702,788	1,503,000	106,242,775	206,739,600	310,109,600	89,672,522	91,739,000	**4,111,928,815**
ENERGY DEBT RECOVERY LEVY	41.00	41.00	-	3.00	4.00	37.00	-	41.00	-	41.00	41.00	-	
ROAD FUND	40.00	40.00	-	-	-	-	-	40.00	-	40.00	40.00	-	
ENERGY FUND	1.00	1.00	1.00	-	1.00	-	-	1.00	-	1.00	1.00	-	
PRICE STABILISATION AND RECOVERY LEVY	12.00	10.00	-	-	-	10.00	-	10.00	-	10.00	10.00	-	
EXPORT DUTY	-	-	-	-	-	-	-	-	8.80	-	-	-	
SPT	48.45	48.02	30.71	46.89	-	46.996	43.14	-	-	51.61	51.61	-	

All taxes are in Ghp/litre

* 2 Cents per litre of ATK were converted at a rate of Ghs4.44 to US$

2016 PETROLEUM TAX REVENUE

Tax Revenues	GASOLINE	GASOIL	KEROSENE	MGO LOCAL	FUEL OIL	LPG	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	EXEMPTIONS	TOTAL
ENERGY DEBT RECOVERY LEVY	589,649,721	702,877,084	-	1,199,370	520,320	104,306,944	-	1,114,380	-	95,180,393	31,168,894	-	(155,729,628.00)	**1,370,287,478**
ROAD FUND	575,268,021	685,733,740	-	-	-	-	-	1,087,200	-	92,858,920	30,408,677	-		**1,385,356,558**
ENERGY FUND	14,381,701	17,143,344	100,000	-	130,080	-	-	27,180	-	2,321,473	760,217	-		**34,863,994**
PRICE STABILISATION AND RECOVERY LEVY	172,580,406	171,433,435	-	-	-	28,191,066	-	271,800	-	23,214,730	7,602,169	-		**403,293,606**
EXCISE DUTY	39,981,127	30,858,018	103,700	117,738	-	2,103,054	97,717	-	-	-	-	-		**73,261,354**
EXPORT DUTY	-	-	-	-	-	-	-	-	14,442,243	-	-	-		**14,442,243**
Total	1,391,860,976	1,608,045,620	203,700	1,317,109	650,400	134,601,063	97,717	2,500,560	14,442,243	213,575,516	69,939,957	-	(155,729,628)	3,281,505,233
Product Share of Revenue	42.42%	49.00%	0.01%	0.04%	0.02%	4.10%	0.00%	0.08%	0.44%	6.51%	2.13%	0.00%	4.75%	104.75%

2016 PETROLEUM TAX RATES AND VOLUMES

Tax Revenues	GASOLINE	GASOIL (REG.)	KEROSENE	MGO LOCAL	FUEL OIL	LPG	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	TOTAL
VOLUMES (LITRES EXCEPT LPG IN KG)	1,438,170,052	1,714,334,350	10,000,000	39,979,016	13,008,000	281,910,659	3,515,000	2,718,000	164,116,400	232,147,300	76,021,692	75,181,500	**4,051,101,969**
ENERGY DEBT RECOVERY LEVY	41.00	41.00	-	3.00	4.00	37.00	-	41.00	-	41.00	41.00	-	
ROAD FUND	40.00	40.00	-	-	-	-	-	40.00	-	40.00	40.00	-	
ENERGY FUND	1.00	1.00	1.00	-	1.00	-	-	1.00	-	1.00	1.00	-	
PRICE STABILISATION AND RECOVERY LEVY	12.00	10.00	-	-	-	10.00	-	10.00	-	10.00	10.00	-	
EXCISE DUTY	2.78	1.80	1.04	0.29		0.75	2.78						
EXPORT DUTY	-	-	-	-	-	-	-	-	8.80	-	-	-	
						9*							

All taxes are in Ghp/litre

* 2 Cents per litre of ATK were converted at a rate of Ghs4.44 to US$

PETROLEUM TAX REVENUE

Tax Revenues	GASOLINE	GASOIL	KEROSENE	MGO LOCAL	FUEL OIL	LPG	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	EXEMPTIONS	TOTAL
ENERGY DEBT RECOVERY LEVY	141,487,332	209,141,013	-	-	-	-	-	-	-	-	-	-		350,628,345
ROAD FUND	138,036,422	204,040,012	-	-	-	-	-	-	-	-	-	-		342,076,434
ENERGY FUND	3,450,911	5,101,000	-	-	-	-	-	-	-	-	-	-		8,551,911
PRICE STABILISATION AND RECOVERY LEVY	41,410,927	51,010,003	-	-	-	-	-	-	-	-	-	-		92,420,930
EXPORT DUTY	-	-	-	-	-	-	-	-	-	-	-	-		-
SPT	158,741,885	234,646,014	-	-	-	-	-	-	-	-	-	-		393,387,899
Total	483,127,476	703,938,042	-	-	-	-	-	-	-	-	-	-	-	1,187,065,518
Product Share of Revenue	40.70%	59.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
	100													

PETROLEUM TAX RATES AND VOLUMES

Tax Revenues	GASOLINE	GASOIL (REG.)	KEROSENE	MGO LOCAL	FUEL OIL	LPG	UNIFIED	MGO Foreign	ATK	GASOIL MINES	GASOIL RIGS	PREMIX	TOTAL
VOLUMES (LITRES EXCEPT LPG IN KG)	345,091,054	510,100,031	-	-	-	-	-	-	-	-	-	-	855,191,085
ENERGY DEBT RECOVERY LEVY	41.00	41.00	-	3.00	4.00	37.00	-	41.00	-	41.00	41.00	-	
ROAD FUND	40.00	40.00	-	-	-	-	-	40.00	-	40.00	40.00	-	
ENERGY FUND	1.00	1.00	1.00	-	1.00	-	-	1.00	-	1.00	1.00	-	
PRICE STABILISATION AND RECOVERY LEVY	12.00	10.00	-	-	-	10.00	-	10.00	-	10.00	10.00	-	
EXPORT DUTY	-	-	-	-	-	-	-	-	9.36	-	-	-	
SPT	46.00	46.00	39.00	46.00	-	48.00	46.00	-	-	46.00	46.00	-	

Released in December, 2020

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